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ABSTRACT

Defined are categories of learning disabilities (LD) that can be remediated in regular public school classes, and offered are remedial approaches. Stressed in four studies is the heterogeneity of LD problems. Suggested is grouping LD children into three categories: no disorder (problem is from the learning environment); minor disorder (problem is from deficiencies in the child and learning environment); and major disorder (problem is from specific disability or serious emotional disturbance). A conceptualization of the learning process is described as are teaching tasks that facilitate the best match between environmental circumstances and the pupil's assimilated schemata. Suggested for teaching LD children are an individual-oriented environment and sequential, hierarchical strategies for three levels: school subject mastery (A), mastery of prerequisites (B), and remediation of interfering behaviors (C). Described for personalized instruction are aspects such as the difference between personalized and individual instruction, and a classroom sequence involving three phases: the teacher-pupil planning phase, work phase, and culmination phase. Explained are remedial concepts such as developmental and remedial instruction, and diagnistic teaching. Listed alphabetically by author are annotated references for the three levels. Accountability of educational programs is seen to be achieved by evaluation facets such as key factors of description and judgment. (Included in appendixes are variables for analyzing educational programs, tasks for developing and evaluating a school system program, and suggestions for intervention.) (MC)

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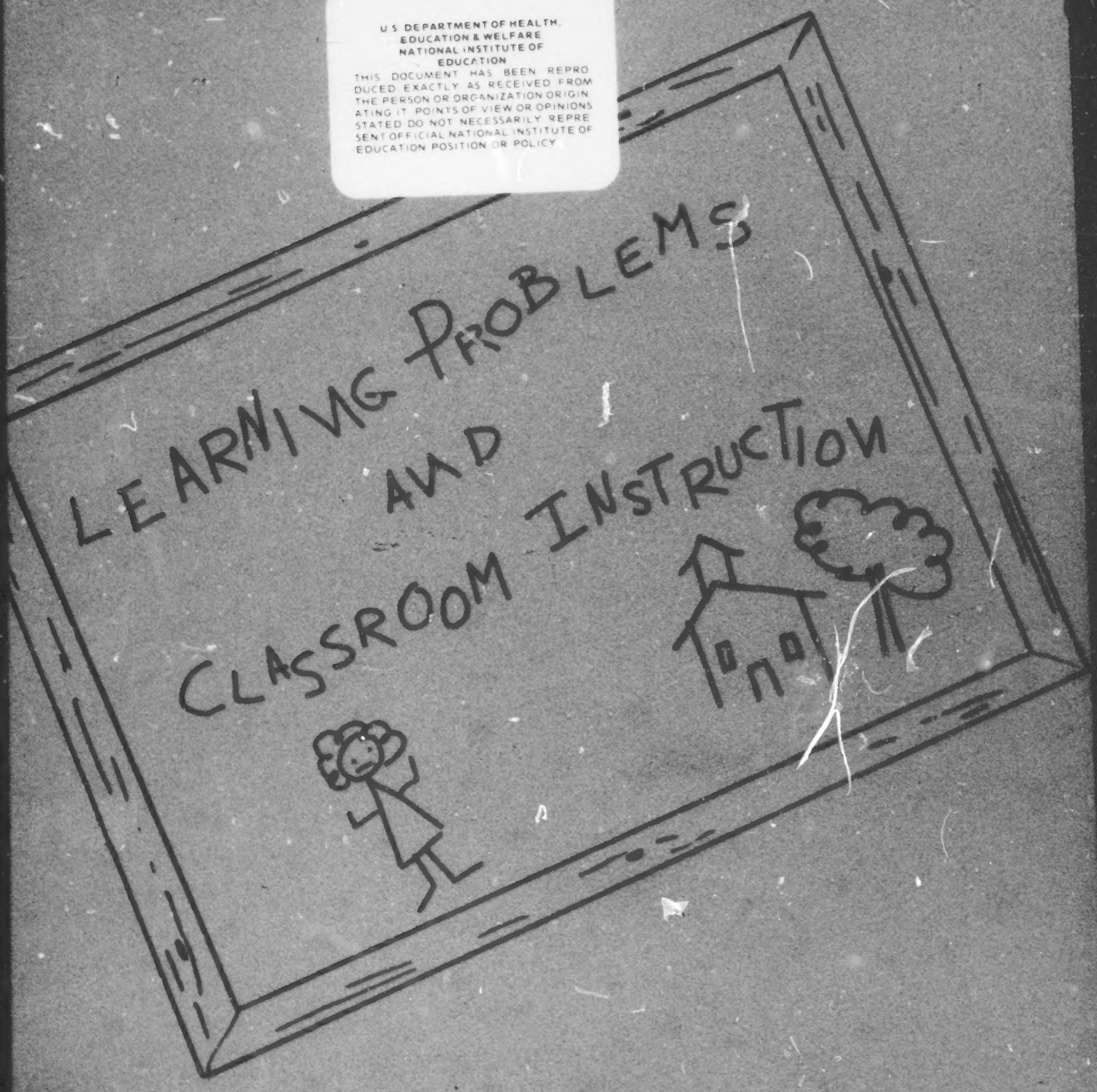

by
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LEARNING PROBLEMS

and

CLASSROOM INSTRUCTION

Howard Adelman*

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Preface

The document you are about to read was prepared as part of a Special Project funded by the Division of Training, BEH, USOE. This preface (1) describes the general frame of reference from which we approach the concerns of special education, (2) summarizes the major products produced as part of the Special Project activity, and (3) acknowledges those dedicated persons without whom the project could not have been undertaken.

A General Frame of Reference[1]

It is unfortunate that special educators continue to deal with major topics, such as classroom instruction and personnel preparation, as if these topics were unique to special education or a specific category of exceptionality. A major effort needs to be made to avoid contributing further to the erroneous impression that the concerns of general and special education (and of the various areas of special education) are mutually exclusive and/or substantively different. This impression is not only false, but leads to the harmful impression that general and special educators (and various groups of special educators and other professionals) have little to contribute to each other.

It seems reasonable to suggest that, in reality, the concerns of

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[1] Some of the discussion which follows also appears in an article by the author entitled "The relationship between general and special education," (Academic Therapy, 1972, VII, 323-326).

special education are best viewed within the framework of a conceptualization of the basic concerns confronting the American system of formal education. Figure A represents my attempt to summarize these basic concerns and the relationship between general and special education with reference to these concerns. Broadly and practically stated, the basic programmatic concerns are:

1) What should be the role (nature and scope) of formal education in America today and what changes should be considered for the future?
2) What and how should we teach?
3) What types of personnel (roles and functions) are necessary for accomplishing the desired goals of formal education?
4) How can we best recruit, educate, and retain the high level of personnel necessary for ensuring high quality education?

It seems clear that these questions are so closely interwoven that the manner in which any one is answered has profound implications for the others, e.g., the role one establishes for the schools provides the basis for determining the instructional content and process which, in turn, should clarify the personnel required and their training needs. And, of course, any position taken with regard to these questions raises the concern over evaluation, i.e., what and how to describe and judge the positions which have been and currently are being postulated as answers to education's basic concerns.

Finally, with reference to the relationship between general and

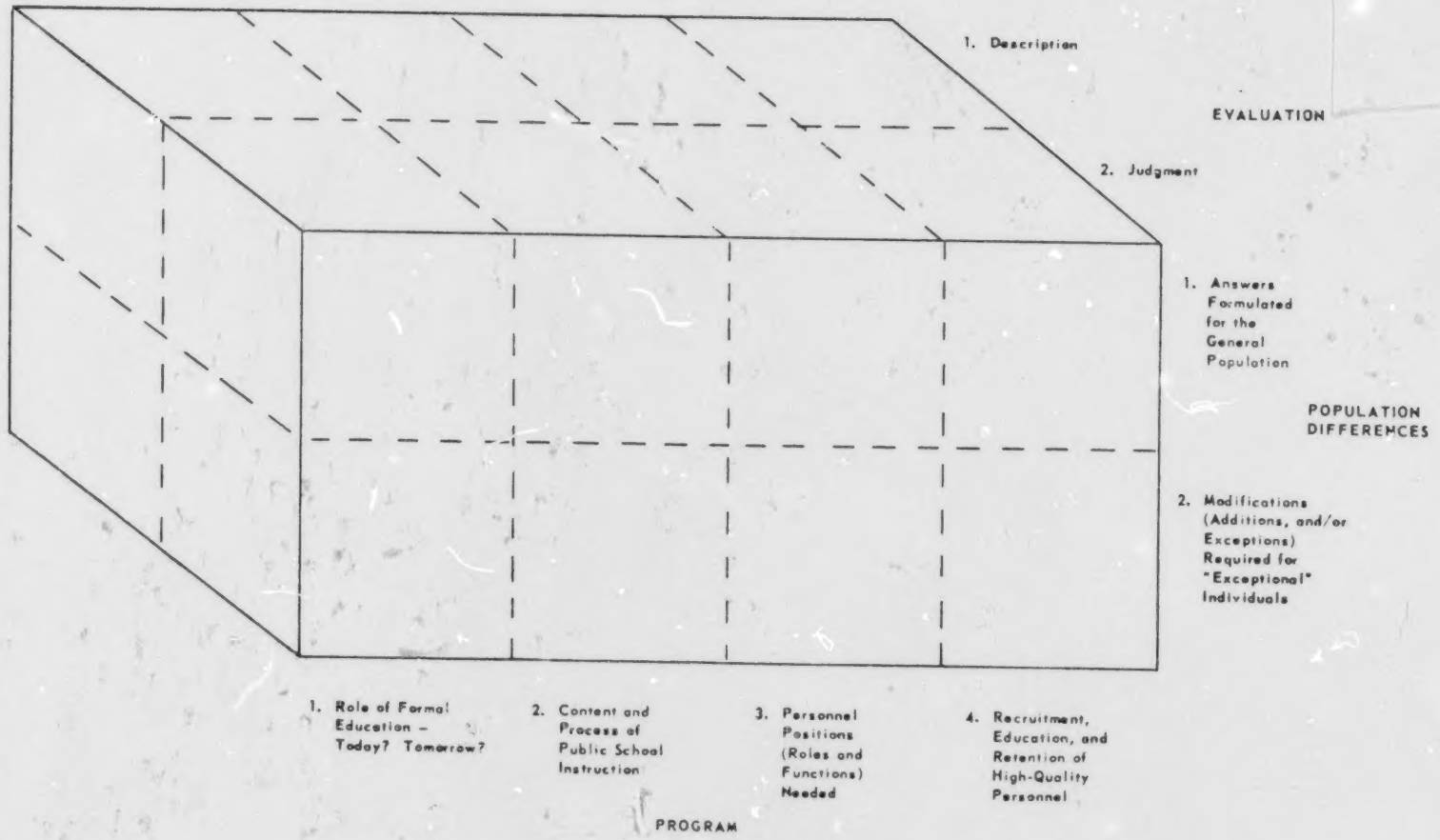
1. Description
EVALUATION
2. Judgment
1. Answers Formulated for the General Population
POPULATION DIFFERENCES
2. Modifications (Additions, and/or Exceptions) Required for "Exceptional" Individuals
1. Role of Formal Education – Today? Tomorrow?
2. Content and Process of Public School Instruction
3. Personnel Positions (Roles and Functions) Needed
4. Recruitment, Education, and Retention of High-Quality Personnel
PROGRAM

Figure A. Basic Concerns Confronting the American System of Education

special education, it is felt that the major issues and problems[2] encompassed by the above-stated concerns are substantively the same for both sub-fields of education. However, since an answer formulated for the majority population may require modifications (additions and/or exceptions) when applied to exceptional individuals, special education is confronted with the additional concern of clarifying rationally and empirically such modifications.

From a conceptual viewpoint, then, it seems reasonable to suggest that the systematic resolution of the basic concerns confronting the education system (see Figure A) requires, first, formulation of answers with reference to the general population and, second, clarification of the modifications required with reference to all and/or specific groups of exceptional individuals. In practice, of course, such a systematic approach is not always feasible. Thus, special educators often find it necessary to work in an area of concern where major issues and problems have been resolved for the general population in ways which special educators view as unacceptable or where answers simply are nonexistent. In such instances, whether or not it is explicitly understood and stated, special educators are forced to deal with issues and problems which are common to both general and special education, and therefore, the answers formulated have application for both the majority population and exceptional individuals. That is to say, such answers will necessarily

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[2]The term concern is used to delineate a broad area of focus; the term issue is used to delineate a sub-area over which there is theoretical and/or procedural disagreement; and the term problem is used to delineate a sub-area over which there is no disagreement, but there is difficulty in formulating an appropriate solution.

be either modified versions of answers which have direct application to the general population or they will be directly applicable as formulated.

(Unfortunately, the application of such answers to the general population often is not made because the special educator has not discussed his work's relationship to general education. It is for this reason that many of special education's potential contributions to general education are lost. Equally as unfortunate is the waste which accrues from the failure of special educators to build upon the foundation laid by their colleagues in general education. With regard to a wide variety of questions related to the education of exceptional individuals, it is not uncommon for special educators to approach such concerns [issues and problems] as if the questions raised were new and unique, rather than simply being specialized versions of more basic questions which have long confronted general education. As a result, special educators too often needlessly redo work previously accomplished by general educators, both groups initiate parallel activities, and, in general, progress in both sub-fields of education is hindered. [Analogous implications, of course, could be discussed with reference to the interrelationships between the various categories of exceptionality.])

The preceding views should clarify for the reader the orientation with which I approach such questions as:

1) What is the nature of the heterogeneity which exists in such populations of pupils currently categorized as learning disabled, emotionally disturbed, educationally handicapped, disadvantaged, and so forth, and what are the implications of this heterogeneity for service, training, and research?

2) What and how should we teach these pupils?

3) Do we need specialist teachers?

4) How should we educate personnel to ensure high quality classroom programs which meet the needs of such pupils?

5) How should we evaluate the educational programs which serve such pupils and the programs which prepare the needed professionals?

Products

In the various written products resulting from project activity, some ideas and experiences are shared which have a bearing on these and other related matters. What is presented is neither rooted solely in special education nor intended only for special educators. The concepts and practices reflect an analysis of general and special education classroom and personnel preparation programs; the implications which are suggested are for regular and special classroom instruction and regular and special personnel preparation programs. It is, indeed, my hope that the various products will have some heuristic value for any reader and for the field at large. These products are:

I. Competency-Based Training in Education: a conceptual view--This monograph presents a conceptual model of the major phases and tasks involved in planning, implementing, and evaluating personnel preparation programs in the field of education. Specifically, seven phases are discussed: (1) the formulation of the program rationale, (2) curricular planning, (3) evaluational planning, (4) administrative planning, (5) instructional planning, (6) program implementation, (7) program

evaluation. Key references are provided to resources which have relevance for each phase. Also discussed are: the view that competency-based training is an important but insufficient orientation to personnel preparation, and some ideas related to the development and diffusion of prototype models. Included in the appendices are: references for competency-based and other related personnel preparation program models, a representation of the sequence of major tasks involved in planning, implementing, and evaluating a school system program, a table describing sources of information and materials, and brief discussions of three important topics related to personnel preparation--"Recruiting and Maintaining Education Professionals," "Some Specific Implications for the Preparation of Teachers," and "Criteria for Admission to Preparation Programs and Accredited Professional Standing."

II. Facilitating Educational Change and Preparing Change Agents--This monograph is divided into two parts. The first part, entitled "The Development and Diffusion of 'Mainstreaming' Approaches," is devoted to a discussion of procedures by which prototype mainstreaming approaches might be developed, disseminated, installed, and maintained. More specifically, (1) four major developmental steps are discussed, (2) factors which must be dealt with in planning strategies for institutional change are identified, (3) a proposal for facilitating national diffusion is suggested, and (4) an example of a local diffusion strategy using master or specialist teachers as change agents is described.

The second part of this monograph is entitled "The Preparation of Change Agents Who Can Diffuse 'Mainstreaming' Approaches." The dual

purpose of this section is (1) to describe the pilot program we implemented to prepare change agents and (2) to discuss the implications derived from our experiences and findings which have relevance for the future preparation of such personnel. Topics discussed are the selection of participants, program rationale, instructional content and process, and program evaluation.

III. Learning Problems and Classroom Instruction--This monograph presents our orientation to the topic of youngsters with learning/behavior problems and to the question regarding what teachers should do with such youngsters. The primary emphasis is on conceptualizing the classroom needs of groups assigned labels such as learning disabled, emotionally disturbed, educationally handicapped, and culturally disadvantaged. The conceptualization which evolves is based on the view that each of these categories encompasses an extremely heterogeneous group of youngsters--ranging from those who do have major disorders-deficits which interfere with their learning to those whose learning and behavioral problems stem primarily from the deficiencies of the school system. This view of the heterogeneity which exists within such exceptional children groupings leads us to suggest some very specific implications for diagnosis, remediation, and prevention, and these implications, in turn, lead to a discussion of implications for teacher education and accountability.

More specifically, part 1 ("Learning Problems Revisited") encompasses in the initial chapter, a description of four youngsters with learning problems. This is followed by a general discussion of the heterogeneity which exists in the learning disabled, emotionally disturbed, educationally handicapped, and disadvantaged populations (Chapter 2), and a

general conceptualization of the processes of learning and teaching and their relationship to successful and unsuccessful classroom instruction (Chapter 3). In part 2 ("Remedial Classroom Instruction"), building on the concepts evolved in part 1, it is suggested that teachers can identify and attempt to meet the remedial needs of pupils with learning problems by employing a set of sequential and hierarchical teaching strategies. A general exposition of the two step process which is involved is presented in Chapter 4 and is elaborated upon, conceptually and practically, in Chapters 5-8. Finally, with a view to the need for accountability in education, the process of evaluation is conceptualized and some ideas are offered for evaluating school programs (Chapter 9). Also included in the appendices are discussions of key variables related to educational programs, problems related to early intervention efforts, motivation and the classroom, and instructional procedures (a generic view).

IV. Resource Guide: Instructional Planning--This resource guide was prepared as a companion work to the monograph entitled Competency-Based Training in Education: a conceptual view (cited above). It is intended primarily for those actually engaged in the tasks of instructional and curricular planning, but it should also be useful to those who wish to learn more about such planning, Specifically, the guide includes: I. annotated references to some key general references which provide an orientation to curricular and instructional planning; II. a guide to some specific resources on curricular and instructional planning; III. an outline of sources of information and materials; IV. discussions of curricular and instructional planning, including several supplementary

"handouts" designed as instructional aids.

V. Resource Guide: Evaluational Planning--This resource guide contains annotated references to relevant literature and other sources of information. It was prepared as a companion work to the monograph entitled Competency-Based Training in Education: a conceptual view (cited above). Described are a variety of resources which can be used by (a) evaluation novices who want to pursue a program of self-education and (b) persons with a fair degree of understanding regarding evaluation, but who want to expand their knowledge regarding the process of evaluation and the resources which are available for use in teaching about, planning for, or carrying out program evaluation. The annotated references in this document are divided into the following parts: I. some key general discussions relevant to program evaluation; II. specialized discussions and practical aids focusing specifically on (a) methodology and design, (b) teacher effectiveness, and (c) handbooks and guides; III. discussions of techniques and instruments including (a) generic discussions, and (b) catalogues and reviews; IV. general resources for finding information relevant to evaluation. Also included are two appendices: (A) some thoughts and aids on evaluational planning; and (B) procedures being developed for evaluation of the experimental program undertaken as a part of our special project activity.

Acknowledgements

The carrying out of this project was made possible by the efforts and dedication of a great many individuals at the University of California, Riverside, and in the Riverside City Schools. The contributions have

been many and diverse. It is not feasible to describe and acknowledge every individual's contribution; however, there are some individuals whose intensive participation in various aspects of the project should not go unmentioned.

Of major importance throughout the duration of the project has been the initiative and energy of the project staff. Molly Carpenter was involved in every phase of the project over the past two years. Her ideas, productivity, attention to detail, and her moral support truly were indispensable. My long time colleague, Jeannie Fryer, escaped (reluctantly, I know) after the first year; nevertheless, her stamp on the project was indelible. We could not have survived the first year without her, and her periodic consultation during the second year was most helpful. The rest of the staff--Marilyn Lucas, Noi Thongutai, Eddi Knopf during the first year, Jim Hull, Elliott Duchon, Carol Meredith during the second year--contributed in countless, unique ways. Their participation in the various phases of the project made the hard times bearable and the good times a real joy. Clearly, the project staff shares the responsibility as well as the credit for all that has been accomplished.

The interest and cooperation of the teachers and administrators of the Riverside City School District were all that any project staff could ask for. We are especially indebted to Ray Berry, Bud Marley, Mabel Purl, Tom Phillian, Bill Nichols, Bill Hart, Joan Cudney, Raul Hernandez, David Tew, Chris Cordner, Dan Kenley, Sheila Fields, Isabel Flannigan, Carol Dolener, Jean Hubbel, Kathy Kimball, Judy Hjelseth,

Laura Amick, Ida Robinson, Kathy McNichol, Kristie Streifel, and the many persons at Adams, Palm, Madison, and Longfellow Elementary Schools who contributed in various ways.

We were most fortunate that there were five venturesome individuals who were willing to take a year's leave of absence from their classrooms in order to enroll in the experimental program. Somehow they survived their experience. They are: Sheila Coker, Sally Grossman, Betty Hart, Alverna Messick, and Imelda Sullivan. Without their initiative, courage, and competence, this project could not have been undertaken.

Finally, but not least, there is Nancy Adelman. She's responsible for more of this than she knows.

Howard Adelman, Ph.D.
Project Director
August, 1973

LEARNING PROBLEMS AND CLASSROOM INSTRUCTION

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INTRODUCTORY NOTE

Learning problems -- the words conjure up images of children who are suffering, parents who are frantic, and teachers who are frustrated. Who are these learning problem youngsters and what should teachers do with them?

The primary emphasis in this monograph is on conceptualizing the classroom needs of groups assigned labels such as learning disabled, emotionally disturbed, educationally handicapped, and culturally disadvantaged. The conceptualization which evolves is based on the view that each of these categories encompasses an extremely heterogeneous group of youngsters -- ranging from those who do have major disorders-deficits which interfere with their learning to those whose learning and behavioral problems stem primarily from the deficiencies of the school system. This view of the heterogeneity which exists within such exceptional children groupings leads the writer to suggest some very specific implications for diagnosis, remediation, and prevention.

It should be emphasized at the onset that the ideas, concepts, hypotheses, and practical suggestions presented in this monograph have evolved during the past fourteen years of service, training, and research effort in public and private school settings and at the University of California's Los Angeles and Riverside campuses.

During that period, some of the material presented in the following chapters was published in professional journals and in reports to various funding agencies and professional groups. Perhaps the best way for the reader to approach this work is to consider it as a progress report of one professional's thinking and experimentation. (In this connection, it also should be noted that I and my colleagues at U. C., Riverside and at Los Angeles, and in the public schools in Riverside and Los Angeles currently are engaged in activities which will allow for a more systematic investigation of many of the ideas and hypotheses which the reader will encounter in this monograph.)

I. Learning Problems Revisited

Chapter 1

Barry, Jenny, Harold, and Mark

The descriptions which follow are intended to provide some prototypical examples of certain types of learning problems. While they are based on actual cases, the descriptions have been adapted to better serve the purposes of this presentation. In particular, the statements regarding placement decisions were developed entirely to meet the needs of this monograph.

Barry

Barry is eight years old. He lives in a middle class home environment with his father (who is a certified public accountant), his mother (who has recently returned to college), and his younger brother (age 4). There is no indication of any gross problems at home. (There is the usual amount of sibling rivalry, and, of course, the parents are anxious over Barry's school problems.)

The boy recently had a complete physical examination, including neurological, opthomological, and otological tests, and was found to be in excellent physical condition, with no vision, hearing, speech, or dominance problems. (He is right-handed.) His health has been excellent since his birth (which was uncomplicated).

Barry is described as having been a very happy, well-behaved youngster up until he was about six and a half (mid-way through the first grade). As he proceeded through the first grade, he made no progress in reading and writing and increasingly became a behavior problem, both at school and at home. (Interestingly, his progress in arithmetic was fine during this same period of time, and he was quite good at drawing

pictures.) By the end of the second grade, he frequently refused to go to school, and when he did go, he showed no interest in learning to read and write and was a continuous source of distraction to other pupils because of his negative behaviors. His second grade teacher asked that the school psychologist see the boy.

The psychologist talked with Barry and administered several tests. The youngster's I.Q. was 123 (superior range). However, he did not fair so well on the Bender Visual Motor Gestalt Test, the Frostig Developmental Test of Visual Perception, and the Wide Range Achievement Test. He was found virtually to be a non-reader and non-writer. The psychologist recommended placement in a Learning Disability classroom. The principal, however, feels that he has a regular classroom teacher (Mrs. Johnstone) whose classroom environment might be just what Barry needs.

Jenny

Jenny is eight years old. Her parents are divorced. She lives with her mother, brother (age 10), and sister (age 5). Her father is a salesman and contributes minimal support; her mother is on welfare. Jenny was four when her parents divorced. There was a period of upset at that time, but she is described as coping rather well with the situation. When she entered kindergarten at age 5, she went willingly and was judged to be happy both at school and at home. The only concern anyone noted at that time was that she appeared timid about going into new situations; however, this was seen as being no different than what is observed in many other five year olds.

Medically, the girl's health always has been described as good. There were no complications during the pregnancy or at birth. A recent

examination indicates continuing good health, although the pediatrician feels she should gain some weight. She wears glasses to correct a mild near-sightedness. The school nurse noted a marked right-left confusion. She has a tendency to favor her left hand, but there is not a clear dominance; she is dominantly right-eyed, and consistently kicks with her left leg. Her speech is clear, but she is described as not a very talkative child.

By the end of the kindergarten year, the teacher had noted that Jenny had some difficulty remembering the names of letters and colors, got confused when counting, and had trouble with various other readiness activities. In the first grade, Jenny consistently tried to meet the academic demands, and, as consistently, she failed. In the second grade, she no longer tried. Mid-way through the year the teacher requested testing to determine if Jenny could be placed in a special class.

The testing showed her to have a (Stanford-Binet) I.Q. in the average range (108). She had no difficulty with the Frostig Developmental Test of Visual Perception; however, her performance on the Illinois Test of Psycholinguistic Abilities (ITPA) and on the Wide Range Achievement Test were well below the norms. The psychologist recommended immediate placement in a Learning Disability class, but there was no space available at that time, and so Jenny's name was placed on the waiting list. Since the teacher did not feel Jenny should remain in her class, she was assigned to Mrs. Johnstone's room.

Harold

Harold is eight and a half years old. His is an extremely wealthy

family. His father is a very successful building contractor, and his mother is a psychiatric social worker. Harold is their only child.

The boy was a problem from infancy. He was an extremely restless baby, colicky, and a poor eater. As he bagan to crawl and toddle, his gross motor movement was very jerky, and he was clumsy and awkward when he handled objects. At the age of two, he was diagnosed as having mild brain damage which was attributed to hypoxia (reduced oxygen to the brain) occuring at birth. (He was a breech-birth.)

When Harold entered nursery school, he was seen as immature in his motor development but was quite verbal. He related quite well to the other youngsters. In kindergarten, the only problems noted by the teacher were that "He seems to have difficulty with perceptual-motor tasks." By the middle of the first grade, his teacher indicated he was not progressing as rapidly as the others in the class. The parents decided to consult the family doctor who recommended that they have a psychological evaluation done at the learning disabilities clinic housed at a local university.

After testing Harold, the psychologist at the clinic assured the parents that the youngster was of at least average intelligence. (His Stanford-Binet I.Q. was 102). He recommended and it was decided that the boy should have some tutoring support to help him keep up with his classmates. Despite this help, Harold continued to lag, and by the end of the second grade, he was still only functioning at the first grade level with reference to basic school skills (reading, arithmetic, and mechanics of English). In both his reading and writing, he was making frequent word, letter, and number reversals; his handwriting was extremely poor -- some words being completely illegible. And, as other youngsters

became increasingly aware of his academic problems, Harold began to withdraw from social contacts and became sullen.

The principal and the teacher both felt that Harold should be placed in a Learning Disability class for the coming year. The parents, however, were against the idea of enrolling him solely in a remedial class if there was any alternative. Therefore, it was agreed to split his school day between the Learning Disability class and the classroom of a regular teacher (Mrs. Johnstone) who had had some success previously with a youngster like Harold.

Mark

Mark is seven years old. He was adopted at the age of 2, and the adoptive parents do not know anything about him prior to that point. They have no other children. The father is a lawyer; the mother is a former secretary (She is a high school graduate.) They describe themselves as a quiet home-oriented couple. They describe Mark as being a quiet youngster when he first came to them. (Indeed, they chose him because he was not a noisy, hyperactive youngster.) At the time of the adoption, he was certified as being in excellent physical condition.

They first became concerned about his behavior when at two and a half years of age he started crying and throwing tantrums whenever they took him outdoors. Their pediatrician at first suggested the boy would outgrow the behavior, but after six months and no change, he referred them to a child psychiatrist.

After examining Mark, the psychiatrist recommended placement in a therapeutic nursery school. The youngster was enrolled in the school, and was subsequently described by his teacher as always frowning, never interacting with the other children, given to frequent outbursts (crying,

screaming, kicking), phobic about being exposed to new experiences (e.g., he would shriek whenever a new child was brought into the class or he was asked to do something out of the routine).

The school kept Mark until he was six, but then had to terminate him as he was too old for their program. At that point, there was an attempt to adminster some psychological tests, but he would not cooperate. The parents enrolled him in a private school for disturbed children, but after six months his behavior was worse than when he entered. At that point, his mother indicated that she could no longer cope with him, and it was decided to place him in an in-patient psychiatric hospital. The hospital has a special school program in which they are attempting to help Mark and others like him.

Chapter 2

Labels and Learning Problems[1]

With the writing of the Children with Specific Learning Disabilities Act, Congress added its official sanction to this category of exceptionality. The definition adopted in this legislation is the one formulated by tne National Advisory Committee on Handicapped Children which specifies children with specific learning disabilities.

> ...as those who have a disorder in one or more of the basic psychological processes involved in understanding or in using language (spoken or written), which disorder may manifest itself in an imperfect ability to listen, think, read, write, spell, or do mathematical calculations. These disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.[2]

It is evident that the intent of those who use the term "Specific Learning Disabilities" is to delineate a target population consisting of a definite type of problem youngster. And yet, as long as current practices remain unchanged, it seems more than likely that the group of students categorized as specific learning disabled is and will continue to be heterogeneous with regard to both etiology and appropriate remedial strategies. In this connection, the position taken in this monograph is that the learning disability population is not so specific, but, in reality, consists of three major subgroups of youngsters with learning problems.

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[1] This chapter is an expanded version of two previously published articles by the author entitled: "The not so specific learning disability population," (Exceptional Children, 1971, 37, 528-533) and "Learning problems: I. An interactional view of causality," (Academic Therapy, 1970-71, VI, 117-123).

[2] The number of youngsters who are judged to fit this definition has been conservatively estimated as ranging from 1 to 3 percent of the school population or roughly 500,000 to 1,500,000 students.

These subgroups include at one end of a continuum those youngsters who actually have major disorders interfering with learning (e.g., Harold, Mark) and at the other end of the continuum those whose problem stems primarily from the deficiencies of the learning environment (e.g., Barry); the third group encompasses those youngsters with minor disorders who, under appropriate environmental circumstances, are able to compensate for such disorders (e.g., Jenny). The remainder of this chapter is devoted to an explanation of this position.

An Interactional View of the Causes of Learning Problems

At present, the majority of youngsters who come to be diagnosed as learning disabled (LD) have already experienced some degree of failure in their efforts to perform as requested in the classroom. It is well documented that such failure produces effects which can confound efforts to diagnose, reliably and validly, the cause of the problem. Thus, it seems likely that many youngsters who are diagnosed as learning disabled are so labeled on the basis of inferences derived from data which are of questionable "post-dictive" validity. In fact, it may be that such youngsters are so labeled primarily on the basis of assessment data which reflect little more than the effects of the school failure.

Despite the lack of reliable and valid etiological data, many professionals have tended to act as if all youngsters who are labeled as learning disabled are handicapped by an internal disorder which has caused the learning problems. Unfortunately, this emphasis on the "disordered child" has tended to restrict the range of efforts designed to enhance our knowledge regarding the etiology, diagnosis, remediation, and prevention of learning disabilities.

There is a viable alternative to this "disordered child" model.

This alternative view emphasizes the dynamic nature of the process by which school skills are acquired. Thus, the model stresses that a given youngster's success or failure in school is a function of the interaction between his strengths, weaknesses, and limitations and the specific classroom situational factors he encounters, including individual differences among teachers and differing approaches to instruction. Stated differently, learning problems result not only from the characteristics of the youngster, but also from the characteristics of the classroom situation to which he is assigned.

Key Characteristics

Throughout the following discussion, there is frequent reference to the characteristics of the youngster and of the program in which he is required to perform. Therefore, there is need to be more explicit as to just which characteristics are of major relevance.

The important characteristics of the youngster are conceptualized as his behaviors, skills, interests, and needs as manifested in the school situation. In addition, of course, it is recognized that all youngsters differ from each other in terms of: (a) development -- in sensory, perceptual, motoric, linguistic, cognitive, social and emotional areas; (b) motivation -- defined in this instance as the degree to which a youngster views a specific classroom activity or task as meaningful, interesting, worth the effort, and attainable through an appropriate amount of effort; and (c) performance -- emphasizing rate, style, extent, and quality as the major variables.

The important characteristics of the classroom situation include the personnel, goals, procedures, and materials which are employed in

the school's efforts to provide effective and efficient instruction.[3] Of particular relevance for the following discussion, these situational variables are seen as combining differentially to produce classrooms which vary critically in terms of the degree to which the program: (a) allows for the wide range of developmental, motivational, and performance differences which exist in every classroom; (b) is compatible (does not conflict) with the fostering of each youngster's desire to learn and perform; and (c) is designed to detect current and potential problem students and is able to correct, compensate for, and/or tolerate such deviant youngsters. This dimension may be conceptualized as the degree to which the program is personalized.

Hypotheses and Implications

The nature of the interaction of the child and program characteristics, then, is seen as the major determinant of school success or failure. The hypothesized relationship between these two sets of characteristics and school success and failure can be stated formally as follows: The greater the congruity between a youngster's characteristics and the characteristics of the program in which he is required to perform, the greater the likelihood of school success; conversely, the greater the discrepancy between the child's characteristics and the program characteristics, the greater the likelihood of poor school performance.

This hypothesis suggests that there are children whose school

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[3] See Appendix I for an outline of some of the key variables to be considered in analyzing educational programs.

difficulties are due, primarily, to the fact that their classroom programs are not effectively personalized to accomodate individual differences. Therefore, as a corollary, it is hypothesized that the greater the teacher's ability in personalizing instruction, the fewer will be the number of children in her classroom who exhibit learning or behavior problems, or both; conversely, the poorer the teacher's ability in personalizing instruction, the greater will be the number of children with such problems. It is unknown how many of these learning problem youngsters are diagnosed as learning disabled at some point in their schooling. However, with the increasing interest in the area of learning disabilities, it seems probable that the number of such youngsters in the population so labeled is increasing.

More specifically, it is hypothesized that there are a least three types of youngsters with learning problems within the group diagnosed as learning disabled. In addition to (a) youngsters who do have major disorders which predispose them to learning difficulties, there are (b) youngsters who do not have such internal disorders but who simply do not function well in non-personalized instructional programs, and (c) youngsters who do have minor disorders but who, under appropriate environmental circumstances, are able to compensate for such disorders in mastering school learning tasks, e.g., if the instructional process is appropriately motivating.[4] The position taken here is that whenever a youngster's learning problems can be attributed to deficits in the

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[4] The issue of compensatory mechanisms has not been well studied, but there are ample examples of highly motivated individuals who have overcome severe handicaps in their efforts to understand and communicate with others.

instructional process, that child should not be categorized as learning disabled. Therefore, for purposes of this discussion, the non-disordered children are referred to as Type I learning problems; the children with minor disorders are referred to as Type II learning problems; and youngsters with major disorders, e.g., children with specific learning disabilities, are referred to as Type III learning problems.

(In this connection, the question regarding what percentage of the current learning disability population actually are Type III, rather than Type I and II, problems is an intriguing one. From personal experience, the Type III group appears to be only about 10-15 percent of the total group currently labeled as learning disabled; it is recognized, however, that without empirical data, such an estimate is easily challenged.)

Other Categories

The above hypotheses and implications apply to several other categorized groups as well. For example, a great number of children with learning and behavior problems have been labeled as emotionally disturbed (ED).[5] This group of youngsters, like those categorized as learning disabled, is viewed as being heterogeneous and as consisting of Type I, II, and III learning problems. In contrast to this view, the majority

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[5] While seriously emotionally disturbed children have been defined in a variety of ways, all definitions tend to characterized such children as manifesting moderate to severe maladaptive behaviors with reference to the society in which they live. The components of such definitions usually include references to hyperactivity or withdrawn behavior, emotional lability, oversensitivity to stimuli, short attention span, difficulties in interpersonal relationships, such as tendencies toward fighting and other active or passive-aggressive actions, and underachievement. Such behaviors are seen, of course, as resulting from severe emotional, other than neurological, impairment. The number of youngsters in this category has been estimated, variously, from 0.5 percent to 10 percent of the school age population.

of states with public school programs for the learning disabled and emotionally disturbed, having established two discrete categories, tend to assume implicitly that each group consists of a different and relatively homogeneous population, while a few states, such as California, encompass both LD and ED youngsters under the rubric educationally handicapped (EH) [6] and tend not to differentiate among youngsters assigned this label. Figure 1 summarizes three views of the LD, ED, and EH populations. The view being hypothesized here suggests that the majority of such youngsters are Type I and II learning problems and that only a small percentage actually come under the heading of specific learning disability or seriously emotionally disturbed. (In this connection, it may be that a more fruitful use of the label educationally handicapped would be to employ this term for Type I and Type II problems and reserve the categories of specific learning disability and seriously emotionally disturbed for Type III problems.)

The population of pupils categorized as disadvantaged[7] provides

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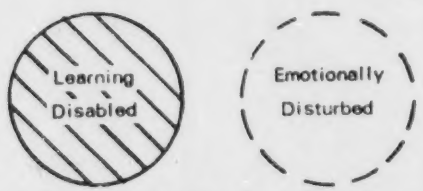
[6] As described in the California Administrative Code, Title 5, Section 3230, an EH minor "...has marked learning or behavior disorders, or both, associated with a neurological handicap or emotional disturbance. This disorder shall not be attributable to mental retardation. The learning or behavior disorders shall be manifest, in part, by specific learning disability. Such learning disabilities may include, but are not limited to, perceptual handicaps, minimal cerebral dysfunction, dyslexia, dyscalculia, dysgraphia, school phobia, hyperkinesis or impulsivity." In California, approximately 43,000 children, 8/10ths of 1% of the public school population, were enrolled in EH programs in 1969-70.

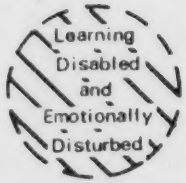
[7] As defined in Title I of the Elementary and Secondary Education Act of 1965, the term "disadvantaged" has been used to designate those pupils who come from families whose income is below $3,000 per year. In addition to economic impoverishment, however, it is clear that the term also is used to designate segments of racial and ethnic minority groups and, in such instances, the term often is intended to connote that such groups are culturally different.

Figure 1

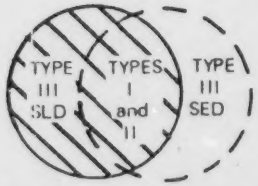
Three Views of the Learning-Disabled, Emotionally Disturbed, and Educationally Handicapped Populations.



Majority view – Learning Disabled and Emotionally Disturbed students are categorized as separate populations.



Minority view – Learning Disabled and Emotionally Disturbed students are grouped together and categorized as Educationally Handicapped.



Hypothesized view – The Learning Disabled and Emotionally Disturbed populations are seen as overlapping and as consisting of three major subgroups of youngsters with learning problems.

Type I No disorder (problem results primarily from the deficiencies of the learning environment).
Type II Minor disorder (problem results from deficiencies in both the child and the learning environment).
Type III Major disorder (problem results from the child's deficits and/or disturbance, i.e., a Specific Learning Disability – SLD – or Serious Emotional Disturbance – SED.

another good example of a group whose variability with regard to school learning and behavior tends to be masked by a label. This state of affairs is particularly lamentable since pupils enrolled in disadvantaged area schools range from youngsters who learn and perform well enough to be viewed as good learners to those who manifest severe learning or behavior problems, or both. That is, while the proportions may differ, the so-called disadvantaged population is viewed as encompassing the same groupings of exceptional and non-exceptional pupils as the population of youngsters who, by contrast, may be called "advantaged." And, thus, it should be possible to designate Type I, II, and III learning problems within this category of pupils.

Labels

The preceding discussion accentuates the inadequacy of such labels as learning disabled, educationally handicapped, emotionally disturbed, and disadvantaged. However, the presentation is not meant to be an indictment of labels and categories, per se. Rather, the emphasis is on the failure of these particular labels, as they are used in current practice, to communicate the nature of the heterogeneity which exists within the categorized population. What is needed to correct this inadequacy is a continuing process by which the categories are refined. For educational purposes, the goal of such refinement should be to enhance the educational relevance of the categorization. In particular, the goal should be to identify and classify those characteristics of youngsters and situations which have direct and important implications for classroom instruction (including preventive and remedial efforts).

In keeping with efforts designed to identify and classify such characteristics, it has been suggested in this chapter that there are at least three types of learning problems in the learning disabled, emotionally disturbed, educationally handicapped, and disadvantaged populations, and in subsequent chapters, the implications of this view for classroom instruction are discussed. However, it should be emphasized that this typology is not seen as providing a sufficient degree of categorical refinement. It is just another step in the continuing process of refining the way in which pupils with learning problems are differentiated.

At this point, it is important to emphasize that there is always the potential for negative consequences to arise as a result of categorizing and labeling a pupil. If there is any one lesson that has been learned by special educators as a result of experiences with programs for exceptional children, it is that there is a clear danger of stereotyping pupils who are given an "exceptional child" label. Some of the possible immediate consequences of such labeling are the predetermination of the pupil's social status vis-a-vis his peers and teachers, the lowering of self-esteem and motivation and, in general, the neglect of individual differences. (This last point is ironic since concern for the exceptional child has evolved from the more general concern over individual differences in learning.)

To avoid such consequences, some individuals and groups have advocated doing away with all labeling. In view of the many instances where labeling practices have been misused and abused, this position is quite understandable. However, it is important to remember that

such misuse and abuse does not invalidate the importance and usefulness of categorization (classification). It should be clear that much of the criticism which has been directed at the inadequacy of current categories and the negative consequences which have accrued from such categorization represents a localizing in the label of the blame for the lack of clarity which characterizes those individuals and groups who determine the values and policies which direct the formulation and use of such categorizations.[8]

[8] See Appendix II for a paper which presents an additional discussion of the negative biasing impact of labeling.

Chapter 3

Learning and Teaching*

Learning....

Teaching....

These two processes are basic to all that has been said in chapter 2 and all that will be said in the remaining chapters. And, yet, a comprehensive review of the various theories which have been offered regarding the nature of these processes is beyond the scope of this monograph. Thus, what follows is a brief conceptualization which is intended to convey the author's view of the processes of learning and teaching and the relationship between these processes and successful and unsuccessful classroom instruction.

The Process of Learning

The following formulation has been evolved from J. McV. Hunt's (1961) extensive review and expansion of Piaget's general conceptions.

In very basic terms, learning can be viewed as resulting from the adaptive interaction between an individual and his environment. To explain the nature of the interaction, Piaget has postulated two complementary processes, assimilation and accomodation, which correspond to inner organization and outer adaptation, respectively.

With reference to psychological functioning, assimilation is the process by which an individual centrally processes environmental circumstances, incorporating them without having to modify his centrally organized structures (schemata), e.g., when something new is perceived as familiar or when new situations are responded to in the same way one has responded to other situations. (As Hunt points out, assimilation

*This chapter is taken from a previously published article by the author entitled: "Remedial Classroom Instruction Revisited," Journal of Special Education, 1972, 5, 311-322.

To further clarify this conceptualization, Hunt has specifically formulated and developed the principle that such "accomodative modification and growth (is) a function of the match between environmental circumstances and existing schemata." From this principle, it may be implied that environmental circumstances produce learning (accomodative modification and growth in schemata) when and only when there is a discrepancy between the circumstances an individual encounters and the schemata he has already assimilated into his repertoire. More specifically, it may be inferred that <u>appropriate learning</u> is dependent upon (1) the discrepancy being within the limits of an individual's capacity for accomodation, and (2) the appropriate operation of the accomodative and assimilative processes. Thus, as diagrammed in Figure 2 [a], an "appropriate match" for successful learning is one where there is an accomodatable discrepancy between one's adaptive assimilated schemata and the environmental circumstances one encounters. ("Environmental circumstances" are viewed as encompassing the combined impact of external and internal stimuli, e.g., physical, socio-cultural, cognitive, and affective stimuli.) For purposes of this discussion, the appropriate match for peak learning is viewed as being a discrepancy which demands the fullest use of one's accommodative capacity.

In contrast, the absence of a discrepancy between the environmental circumstances one encounters and one's adaptive assimilated schemata is viewed as resulting in <u>"arrested" learning.</u> Thus, when there is no discrepancy (a "perfect" match) between an individual's central processing structure and environmental circumstances, there is no accomodative modification and growth (See Figure 2 [b]). This is the situation

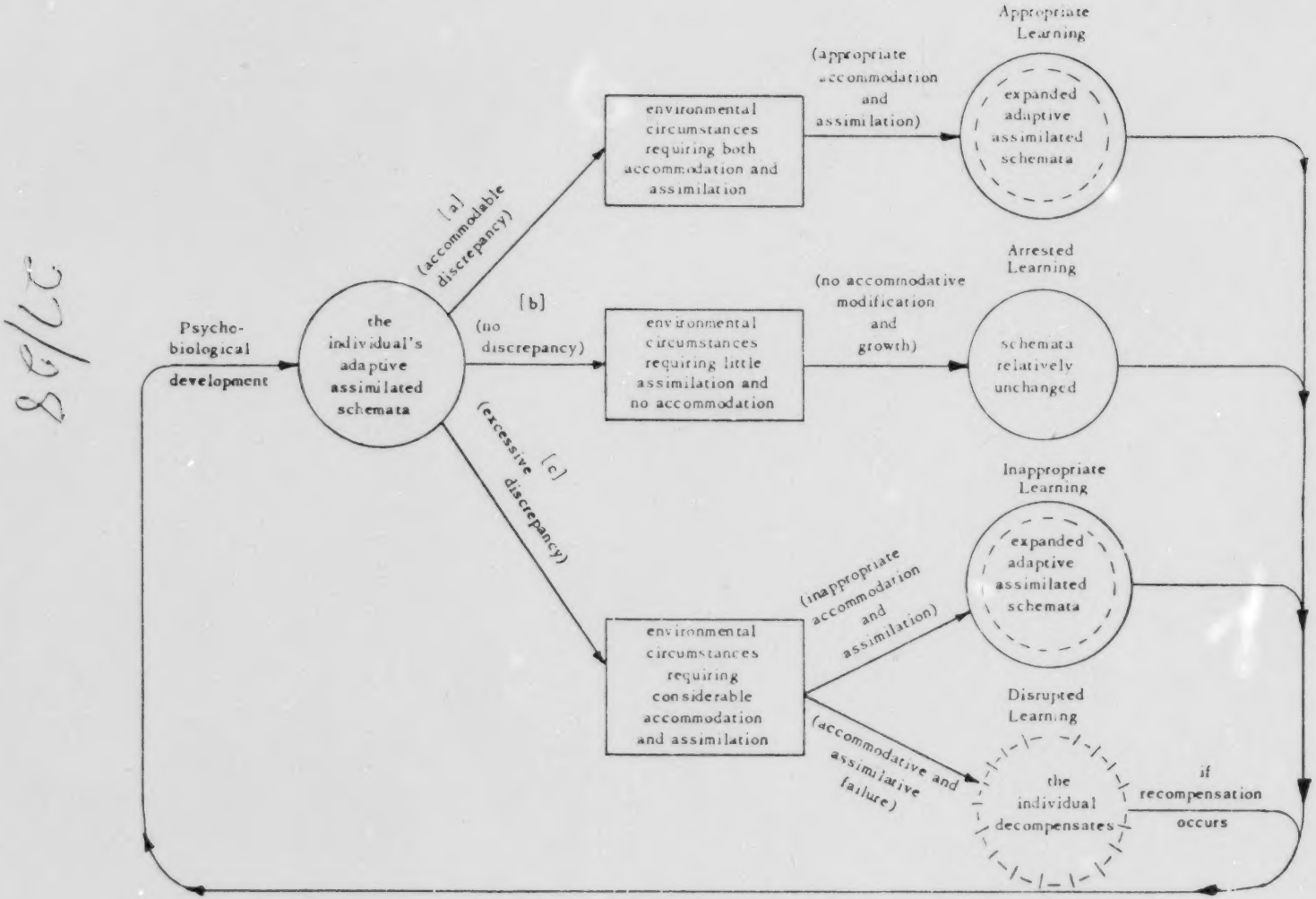


Figure 2. The Process of Learning

when there is nothing to accomodate, such as is the case when there is inadequate stimulation. In such situations, the schemata already assimilated schemata can be strengthened, and/or there will be a lag in the learning process. If the stimulus deprivation is not prolonged, the lag in learning is temporary. However, if the period of inadequate stimulation is lengthy, the resulting lag will be more severe, e.g., with infants, the result would be totally arrested development.

Finally, if there is a discrepancy which is beyond one's accomodative capacity, distress and avoidance responses are evoked. This is the situation when there is overstimulation, extreme discontinuities, and so forth. If the individual cannot avoid the circustances, i.e., must process the demanding variations, the result is (a) inappropriate learning (inappropriate accomodation, assimilation, or both) or (b) "disrupted" learning (accomodative and assimilative failure). Thus, if there is a lengthy period of confrontation with circumstances which must be accomodated, the individual will either acquire a faulty assimilated schemata for adapting to such circumstances or will psychologically decompensate (See Figure 2[c]).[1]

The Process of Teaching

In keeping with the preceding conceptualization of the process of learning, teaching is viewed as the process by which accomodation and

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[1] Selye (1956) has formulated a model, the general-adaptation-syndrome, describing such decompensation. As Coleman (1969) points out, while Selye's formulation is concerned mainly with physiological breakdown, psychological decompensation seems to follow a similar pattern. The model describes the individual's reaction to excessive stress as following three stages: an alarm reaction stage (e.g., the individual is continuously tense and anxious), a stage of resistance (e.g., excessive use of ego-defense mechanisms), and a stage of exhaustion (e.g., psychotic break).

assimilation are facilitated as a result of a "teacher's" efforts to control the match between the environmental circumstances the pupil encounters and the schemata he has already assimilated. (As Hunt [1961] states, "the principle that environmental circumstances force accomodative modifications in schemata only when there is an appropriate match between the circumstances that a child encounters and the schemata that he has already assimilated into his repertoire, is only another statement of the educators' adage that 'teaching must start where the learner is.'") Efforts to control the match, of course, are complicated by the fact that experience and maturation are continually changing the schemata of the pupil; further complications arise because of the varying degrees of access and control which teachers have over relevant environmental circumstances. Because of such factors, the matching process continues to remain a matter of trial and error. Fortunately, some of the trial and error is removed by our knowledge of the general trends and stages of human development and behavior. And even more of the trial and error is removed when we have specific knowledge of the individual pupil's assimilated schemata.

Ideally, then, in his efforts to facilitate accomodation and assimilation, the teacher uses his knowledge of the pupil's schemata in order to vary environmental circumstances in a way which

(1) attracts and focuses the pupil on relevant stimuli,

(2) results in the initiation and maintainance of the pupil's appropriate participation,

(3) produces appropriate communication between the teacher and pupil regarding results, and

(4) strengthens preceding learning and behavior patterns for both the pupil and teacher.

And in this context, any procedure employed in varying the environmental circumstances may be considered a teaching practice. The best procedures, however, are viewed as those which are designed to capitalize on what is known about learning and instruction with specific reference to such matters as:

(a) motivation, e.g., the role of realistic goals, incentives, negative consequences;

(b) attention, e.g., the role of "set", vividness, cues;

(c) performance and practive, e.g., the role of active participation, massed vs. distributed practive, "real life" circumstances, overlearning;

(d) reinforcement, e.g., the role of feedback, mastery, schedules of reinforcement, contingency management;

(e) interpersonal relationships, e.g., task-focused communication, group dynamics, leadership style;

(f) growth and development, e.g., sensory, perceptual, motoric, linguistic, cognitive, social, and emotional;

(g) a particular curricular area, e.g., history, reading, moral development.

The Tasks of Teaching and Learning in the Classroom.[2]

With reference to classroom instruction, the major tasks involved in teaching and learning are not viewed as encompassing the facilitation of peak learning. In or out of the classroom, the problem of facilitating

[2] See Appendix II for a more comprehensive representation of the major phases and tasks involved in systematically planning, implementing, and evaluating a school system program.

the most advantageous match (between environmental circumstances and a pupil's assimilated schemata) for peak learning probably is insurmountable. To even approximate such an ideal would certainly require a considerable amount of specific and active interaction between a teacher and a particular pupil. And, of course, the enrollment level in most classrooms precludes much in the way of such one-to-one interaction.

In such classrooms, teaching involves facilitating an "appropriate match" so that the pupils will learn at least satisfactorily. While it is easier to achieve this than it is to facilitate peak learning, it is still a difficult job. Indeed, it seems clear that, at the present time, the best that teachers can do is to facilitate an appropriate match for a large majority of pupils in their classrooms. The remaining pupils, unfortunately, do not learn satisfactorily.

In order to better conceptualize this problem, the current pupil population can be viewed as varying with regard to the degree of specific and active interaction between the teacher and a particular pupil which is needed in order to facilitate at least satisfactory learning and performance.[3] And the procedures used with this population can be viewed as (a) broad-band practices, i.e., procedures useful in teaching large groups of pupils, and (b) narrow-band practices, those designed for use with small groups and individuals.

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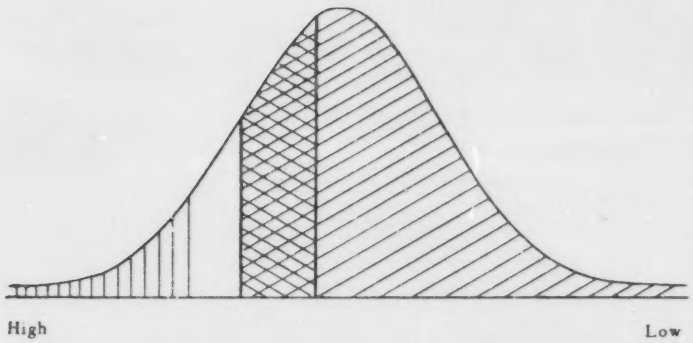
[3] It should be noted that the physical presence of an instructor is not implied, i.e., learning may occur from the learner interacting with materials and managed settings or with an instructor-via-media such as video or film.

Thus, in keeping with the discussion to this point, (1) large group instruction using broad-band practices is seen as being at least a satisfactory means for establishing an "appropriate match" for the majority of pupils; and (2) such instructional practices are viewed as not being satisfactory for all pupils, i.e., those pupils (regardless of I.Q.) whose learning is "arrested, inappropriate, or disrupted". Furthermore, since no claim that current broad-band practices are optimal or that all teachers are equally competent, it seems reasonable to suggest that some pupils develop problems because of the limitations of such teaching practices and inappropriate variations in their application. The rest of the problem pupils, because of the weaknesses and possible limitations of their schematas, are viewed as needing a higher degree of specific and active, one-to-one interaction with the teacher than is possible when broad-band teaching practices must be and/or are used exclusively.

It should be emphasized that the above formulation is consistent with the view, presented in the preceding chapters, that a given pupil's success or failure in school is a function of the characteristics of both the youngster and the classroom situation to which he is assigned. And, the formulation is also consistent with the hypothesis, stated in Chapter 2, that there are at least three types of learning problem pupils, i.e., those pupils whose problems stem primarily from the deficiencies of the learning environment (Type I learning problems); those pupils with minor

disorders who, under appropriate environmental circumstances, are able to compensate for such disorders (Type II learning problems); and those pupils who have major disorders that interfere with learning (Type III learning problems). (Figure 3 represents an attempt to graphically portray the conceptualization of the pupil population which has been formulated in this section.)



Degree of specific and active interaction between the teacher and a particular pupil needed to facilitate satisfactory learning and performance.

Pupils who are learning satisfactorily with current broad-band practices

Pupils who are not learning satisfactorily primarily because of limitations of current broad-band practices and inappropriate variations in their application (Type I and some Type II learning problems)

Pupils who are not learning satisfactorily because they have minor disorders and therefore need a higher degree of specific and active, one-to-one interaction with a teacher than is possible when broad-band teaching practices are used exclusively (some Type II learning problems)

Pupils who are not learning satisfactorily because they have major disorders and therefore must have the highest degree of specific and active, one-to-one interaction with a teacher (Type III learning problems)

Figure 3. A Hypothetical Representation of the Pupil Population

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II. Remedial Classroom Instruction

Chapter 4

Educating Pupils With Learning Problems[1]

In chapter 1, four youngsters with learning problems are discussed. The emphasis in the following chapters is on the education of pupils like Barry, Jenny, and Harold. Mark's education is being attempted in a psychiatirc hospital's in-patient school, and a specific discussion of the programs in such settings is beyond the scope of this monograph. However, many of the ideas which are presented do have relevance, and specific reference to sources which do discuss such programs is provided in chapter 8.

Based on the view of learning problems which has been presented in chapters 2 and 3, a set of sequential and hierarchical teaching strategies has been conceptualized (see Figure 4). Essentially, what is suggested is a two-step sequential process by which the classroom teacher (1) establishes an individual-oriented and motivationally enriched learning environment, and then, if necessary, (2) employs up to three sequential and hierarchical remedial strategies in a sequence that is predetermined by the success or failure of each attempted strategy. That is, after the first step has been initiated, the teacher only proceeds to the second step for those youngsters who continue to manifest occasional-to-chronic learning difficulty. The three sequential and hierarchical strategies, which are included for possible use during this second step, represent three different levels of instructional focus. Level A emphasizes maintaining the focus on mastery of basic school subjects and age (developmentally) appropriate behavior by using a variety of techniques to reteach the specific behaviors and skills with which the youngster is

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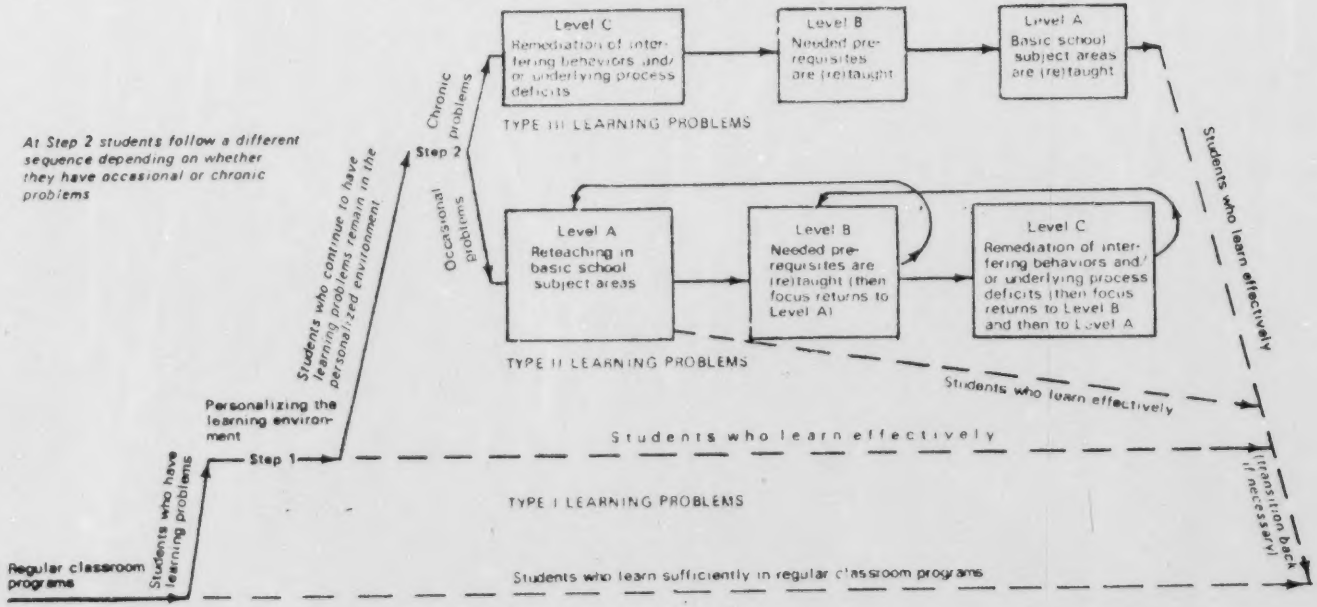
[1] This chapter is adapted from a previously published article by the author entitled "Learning problems: II. A sequential and hierarchical approach to identification and correction (Academic Therapy, 1971, VI, 287-292).

Figure 4

Sequential and Hierarchical Teaching Strategies for the Remediation of School Learning Problems


Level C
Remediation of interfering behaviors and/or underlying process deficits
Level B
Needed prerequisites are (re)taught
Level A
Basic school subject areas are (re)taught
Chronic problems
TYPE III LEARNING PROBLEMS
At Step 2 students follow a different sequence depending on whether they have occasional or chronic problems
Step 2
Occasional problems
Level A
Reteaching in basic school subject areas
Level B
Needed prerequisites are (re)taught (then focus returns to Level A)
Level C
Remediation of interfering behaviors and/or underlying process deficits (then focus returns to Level B and then to Level A
TYPE II LEARNING PROBLEMS
Students who continue to have learning problems remain in the personalized environment
Students who learn effectively
Students who learn effectively
Personalizing the learning environment
Step 1
Students who learn effectively
Students who have learning problems
TYPE I LEARNING PROBLEMS
Transition back if necessary
Regular classroom programs
Students who learn sufficiently in regular classroom programs

having difficulty. Level B emphasizes the development of the prerequisites that are needed before school subjects and age appropriate behavior can be mastered. Level C attempts to deal with any pathological behaviors or underlying process deficits that may interfere with the manifestation of appropriate school learning and behavior.

It should be noted that no formal tests are employed to specify the etiology or level of remedial needs; assessment procedures are employed only to determine instructional needs at a particular step and level. In effect, both the youngster's type of learning problem and the level of his remedial needs are identified only after the impact of each teaching strategy becomes apparent. It will also be noted that most remedial teachers already employ these three levels of action in their classrooms; however, these teachers frequently have not conceptualized their procedures as discrete strategies and often employ them in a rather random manner. In contrast, what is being suggested here is that the approaches should be employed systematically, i.e., sequentially and hierarchically. As may be seen in Figure 4, the following sequence of events is recommended.

Step 1

Those youngsters in regular-classroom programs who are doing poorly (as reflected by such factors as being assigned D or F grades) are provided with a new, motivationally enriched classroom learning environment where the program is personalized, i.e., where individual differences in development, motivation, and performance are accommodated and fostered and where a greater degree of deviation can be tolerated or compensated for. The establishment of a new environment is accomplished either by altering the regular-classroom program or, if necessary, by

removing the youngsters to another classroom.[2] The implementation of Step 1 should be a sufficient remedial strategy for the children who have been referred to above as Type I learning problems. (If Step 1 is successful, it suggests that if the youngster had been in such an environment from the beginning of his schooling, he might not have had difficulties. Therefore, with a view to prevention, such a classroom environment might prove to be a prototype for all regular classroom programs.)

Having established such an environment (Step 1), it should be possible, then, to identify all three types of learning-problem youngsters. Type I youngsters are those who are able to function effectively in the new learning environment; Type II youngsters are those who are able to function effectively in most areas of learning, but who have occasional problems, for example, memorizing such things as the times tables or some vocabulary words; Type III youngsters are those who continue to manifest pervasive learning or behavior problems, or both. Since the first step is sufficient for the Type I youngsters, the next step focuses only on Type II and Type III learning problems.

Step 2

During the second step of the sequence, the teacher may employ up to three teaching strategies. However, the sequence and level of instructional focus of these three strategies differ for Type II

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[2] It will be noted that throughout the following chapters the emphasis is on those pupils who are involved in programs of classroom instruction, as differentiated from those who are tutored individually or in small groups.

and III youngsters. That is, Type II youngsters begin at Level A and Type III youngsters begin at Level C.

When a Type II learning-problem youngster does have difficulty, the teacher must decide whether or not instruction can be delayed in that area, until a later time when learning might prove to be easier. If instruction cannot be delayed, then the next step in the sequential strategy is initiated (Step 2). The emphasis, at first, is on re-teaching behaviors, skills, content, and concepts related to basic school subjects (Level A); Level B instruction is initiated only if reteaching does not succeed; and Level C efforts are initiated only if Level B instruction proves to be unfruitful. Thus, it may be seen that the simplest and most direct approaches are employed first and that all three levels of instruction may not be necessary in the remediation of the problem.

More specifically, when the teacher decides that instruction cannot be delayed, his efforts are directed toward reteaching in the area of immediate difficulty (Level A). Such reteaching is not a matter of trying more of the same, for example, more drill. Rather, it requires the implementation of qualitatively different instructional approaches. That is, if a youngster is having difficulty with arithmetic or reading, the teacher attempts procedures that range from simply using a different kind of general explanation, technique, or material (such as another example or analogy or a "concrete" demonstration) to the use of specialized remedial procedures (such as a kinesthetic approach).

If the teacher finds that reteaching in basic school-subject areas

(Level A) does not work, then he assesses whether the student lacks a necessary prerequisite and, if he does, the teacher attempts to correct this deficiency (Level B). For example, if a youngster is having difficulty with reading comprehension, the teacher might find that the student has little awareness of underlying concepts, such as the relationship between the spoken and printed word, or the student may be deficient with regard to such basic educational skills as the ability to follow directions, answer questions, and order and sequence events. If the teacher is able to detect and correct such deficiencies, then he is in an improved position with regard to the remediation of the original problem.

However, if this remedial effort proves to be unfruitful, the teacher proceeds to the final strategy in the sequence (Level C), which involves the assessment and remediation of interfering behaviors or underlying process deficits, for example, behavioral, perceptual-motor, or linguistic problems. (There seems to be an unfortunate tendency for some educational, medical, and psychological specialists to begin at this level when working with any child who has been categorized as a school problem.)

It should be noted that when remediation at Level B or C is effective, there is, of course, still a need to return, sequentially, to the higher instructional levels. For example, if a student overcomes his basic problems at Level C, then the teacher is ready to reteach any necessary prerequisites that may not have been assimilated (Level B), and then, in turn, is ready to remedy the learning difficulty that originally set the entire sequence into motion (Level A).

In contrast to the Type II learning problem, the Type III youngster is characterized as manifesting pervasive learning or behavioral difficulties, or both. Thus, after the first step, the sequential strategies begin at Level C. That is, initially, efforts are made to assess and remedy either interfering behaviors or underlying process deficits or both, and, as some success at this level is achieved, the sequence proceeds so that needed prerequisites and basic school subjects can be acquired. However, even with Type III learning problems, there are likely to be some areas where the disorder is not severely handicapping and where learning can proceed developmentally or, at least, where remediation can be focused more directly and simply on Level B or A. Therefore, it seems probable that these students can pursue learning at several levels simultaneously. (For purposes of closure, it should be emphasized that there obviously will be Type III youngsters who continue to have chronic problems requiring a continued focus at Level C. It also should be noted that, if necessary, any youngster who has been removed from his regular classroom can be returned when he is once again learning effectively--see Figure 4.)[3]

Specialized Teaching Techniques and Materials

In this chapter the focus has been on a set of general teaching strategies which may be employed, systematically, in efforts to remedy and prevent school learning and behavioral problems (i.e., a model for teaching youngsters with such problems).

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[3] See Appendix III for a paper which presents an additional discussion of three issues related to the above, i.e., (a) the negative biasing impact of labeling, (b) segregation for purposes of intervention, and (c) choice of intervention strategy.

In Chapter 7, there is a discussion of the role played by special techniques and materials in correcting the learning problems of Type I, II, and III youngsters. As is emphasized in that chapter, every remedial teacher, of course, has a grab bag of such specialized approaches, many of which are based on specific theoretical formulations. Since many of these remedial rationales are based on theories that view learning problems as stemming from disorders residing within the youngster, such techniques and materials and their rationales may prove to be valid for youngsters in the Type III category and for some in Type II.

However, with reference to Type I and many Type II learning problems, the position taken in this chapter has been that the disordered-child view is inappropriate. Nevertheless, such specialized techniques and materials can play an important role in the programs of such youngsters. Specifically, a variety of alternative approaches allows the teacher to use, and the student to find, learning activities that not only are appropriate for the youngster's strengths, weaknesses, and limitations, but that are novel and exciting and have not become aversive -- activities that facilitate, simultaneously, an increase in approach and a decrease in avoidance tendencies on the part of the student (and the teacher). For such youngsters, then, the impact of a particular technique and material is not seen as being dependent on the validity of the procedure's underlying rationale; rather, its effectiveness is viewed as being dependent on how successful the approach is in helping the teacher to maintain a student's attention and interest and, in general, to facilitate learning.

Chapter 5

Personalized Classroom Instruction: a conceptual view[1]

While it has been proposed in the preceding chapter that classroom instruction should be personalized as the necessary first step in classroom efforts to remedy learning problems, it should be emphasized that such personalization is not viewed as a remedial approach, per se. Rather, such an approach to classroom instruction is seen as an alternative which may eliminate many of the deficiencies in the learning environment which are viewed as the continuing cause of a significant number of such learning problems.

The purpose of this and the next chapter is to clarify, first conceptually and then practically, the nature of personalized classroom instruction as an approach to the remediation of learning problems. (The presentation is based upon this writer's experiences with an experimental program in which regular classroom teachers were trained successfully to personalize large regular classroom programs as a first step in efforts to eliminate learning and behavior problems [Feshbach and Adelman, 1971; Povey and Fryer, 1972]). In particular this chapter encompasses a discussion of (a) the general features of personalized classroom instruction, (b) how personalized instruction

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[1] The ideas which appear in this chapter were first presented in two monographs by the author entitled "Teacher education and the educationally handicapped" and "Teacher education and the disadvantaged." These ideas subsequently were incorporated in an article by the author and his colleague Seymour Feshbach entitled "An experimental program of personalized classroom instruction in disadvantaged area schools" (Psychology in the Schools, 1971, VIII, 114-120).

differs from other forms of individualized instruction, (c) personalization and the development of skills, and (d) how such instruction relates to the Hawthorne effect and to remediation.[2]

Throughout this and the next chapter, the emphasis is on personalization within the context of a regular classroom program enrolling 30-40 pupils, of which perhaps 3 are Type I, 2 are Type II, and 1 is a Type III learning problem. Of course, the only Type III problem pupils who would be enrolled in such a room would be those who can function profitably while staying within the basic limit for at least a part of the day, i.e., pupils who are learning and are able to avoid interfering with another pupil's right to learn and the teacher's right to teach. In the case of Mark (see chapter 1), he is not able to function within these guidelines. Harold, on the other hand, is seen as a youngster who might be able to participate in such a classroom for part of the day and in another situation for the remainder of the time, e.g., in a special class. At this point, it should be emphasized that even when a pupil is judged to need a special classroom program, personalization still is viewed as step 1 in most classroom efforts to remedy the learning problem. (The features of the personalized program must, of course, be modified appropriately to fit the classroom population.)

General Features of Personalized Classroom Instruction

In implementing a personalized classroom program or, for that matter, any type of instructional procedure, it is assumed that school systems are concerned with pursuing long range goals in the cognitive, affective, and psychomotor domains with reference to both the majority

[2] A more generic discussion of the process of systematic instruction is presented in Appendix V.

population and exceptional individuals. Thus, it is not sufficient to talk only in terms of such immediate instructional objectives as the acquisition of a specific reading skill. Rather, it is necessary to discuss the acquisition of such a skill within the context of pursuing such long range goals as the development by the pupil of (a) positive attitudes towards learning (and school), (b) acceptance of responsibility for learning, and (c) the capability to pursue learning independently, as well as cooperatively.

At the same time, it is assumed that all learning which occurs in a classroom is not, will not, and should not be the result of a teacher's efforts to provide formal instruction. For example, it seems evident that no teacher is able to teach successfully a detailed and identically sequenced set of skills to every pupil in his classroom, and even if it were possible there is no satisfactory evidence to suggest that this type of approach to the instructional and learning processes is necessary or desirable. In keeping with this assumption, the teacher's role is viewed not only as an instructor, but as a facilitator, i.e., a person who leads, guides, stimulates, clarifies, supports. Consequently, he must know when, how, and what to teach and also know when and how to structure the classroom so that students can learn on their own.[3] To this end the teacher in a personalized classroom attempts to involve students (and when possible parents) in planning, implementing, and evaluating the classroom program. Thus,

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[3] In this context, it is interesting to note that much more learning than formal instruction might take place in such a classroom. Also, it should be emphasized that teachers need to focus, first on the question of when and how pupils learn, and then to consider what a teacher's role and function should be with reference to classroom learning.

the teacher and the student (and when possible, his parents) share responsibility for planning and implementing the goals and objectives of the educational program.

More specifically, with regard to daily functions, the teacher's objectives in a personalized classroom are viewed as being concerned with:

(1) varying the classroom environment, tasks, and activities so that there can be a good match with individual differences in development, performance, and motivation;

(2) eliciting active participation by each student in the planning, selection, implementation, practice, and evaluation of learning tasks and activities;

(3) assessing <u>each</u> student and situation with specific reference to what that student can and should be learning and how to facilitate such learning. (This assessment encompasses the detection of current and potential problem students with a view to correcting, compensating for, and/or tolerating such deviant pupils.)

In meeting such objectives, personalized classrooms usually have:

(a) a variety of projects and learning activity centers, e.g., science, arts and crafts, listening, writing, reading, games, study, etc.;

(b) a variety of reading and subject matter materials, including books, worksheets, etc.;

(c) a variety of rewards and consequences;

(d) individual conferences for communication and assessment, e.g., for sharing, stimulating, providing feedback, decision-making;

(e) records of activity and accomplishment kept by both the pupil and the teacher;

(f) flexible groupings based on common needs and interests, some of which will be teacher initiated and some student initiated;

(g) lengthy periods during which pupils either work independently or in small groups without adult supervision;

(h) adult and/or student aides.

Such programs also are characterized by a great deal of emphasis on pupil responsibility in the learning process as manifested in self-direction, self-selection, self-evaluation, and inter-student cooperation. Clearly, such practices are not unique to personalized programs. However, they are particularly well-suited to the goals and objectives of teachers who personalize classroom instruction because such practices allow for individual differences while facilitating the development of competence, independence, and responsibility (including awareness of and positive attitudes towards self and others).

As the above enumeration of goals, objectives, and procedures suggest, personalized classroom instruction can be implemented in a variety of ways. (See chapter 6). Thus, it is evident that the phrase personalization of instruction does not encompass a rigid set of goals and procedures but rather offers a conceptual model of instructional goals and procedures which is intended to guide the teacher in his efforts to facilitate classroom learning.

Differentiating Personalized From Individualized Classroom Instruction

It is important to emphasize that personalization is not incompatible with the formation of specific behavioral objectives and corresponding instructional procedures. Indeed, within the context of a personalized classroom program, a teacher will be aiding individual

pupils in the development of specific knowledge, skills, and attitudes. However, in contrast to most models which advocate specific instructional and behavioral objectives and procedures, the teacher who personalizes instruction will not be as concerned with immediate outcomes as he will be with maintaining a pupil's interest in and positive attitude toward school activities. That is, the accomplishment of immediate objectives is never allowed to subvert long range goals. It is the pupil's motivation (extrinsic and intrinsic) which ultimately is seen as one of the most important factors in facilitating effective classroom learning and appropriate school behavior.

It is this primary emphasis on motivation which distinguishes personalized from individualized instruction. Individualization requires only that a program successfully accommodate individual differences in development and performance; in contrast, to successfully personalize classroom instruction requires effectively accommodating individual differences in development, performance, and motivation.[4] The importance of this distinction is exemplified in many of the attempts to program and prescribe instruction, i.e., efforts utilizing procedures which attempt to fit the instructional sequence to a pupil's individual pattern of errors and successes. While programmed and prescriptive instruction do accommodate individual differences in development and performance, and thus are an improvement over standard, normative educational practices, these approaches often fail to

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[4] Also see Appendix IV for a discussion of "Motivation and the Classroom." Also see the discussion in Appendix III regarding the importance of institutionalizing positive expectations, success experiences, and internalized attributions as a means for combating the negative biasing impact of labeling.

accommodate individual differences in motivation. Consequently, while a pupil may be able to achieve the specific outcomes established by a programmed lesson or by a teacher's prescription, the youngster may be unmotivated to perform, especially after the novelty of new materials and procedures diminishes. (From another perspective, it is suggested that if a pupil is motivated to perform in the classroom, perhaps he will not need to be instructed in such a detailed and extrinsically determined manner. For example, a youngster who is motivated to read probably will engage in the type and amount of autonomous reading which develops many needed skills, thereby altering the nature and scope of teacher prescribed instruction and practice.)

Personalization and the Development of Skills

While the instructional focus of schools goes far beyond the development of skills, skill development is a major concern (see Figure 5 in Chapter 7). As has been suggested, in a personalized program, skills are developed as needed by a pupil and not according to a predetermined instructional sequence. This is not to say, however, that the matter of sequence is ignored. Rather, sequence is viewed broadly. For example, it is recognized that it is easier to learn simple as contrasted with complex skills; it is easier to learn those skills which are directly related to previously learned skills; and so forth. In other words, the concern for sequence is based on what is generally known about the way human beings learn. Minutely-detailed itemizations of skills as presented in many basal textbooks and as developed by some proponents of

specific instructional objectives are seen as unnecessary and often harmful in that they often lead teachers to believe that pupils must be taught each and every one of the skills. It cannot be emphasized often enough that every pupil does not need to have everything taught; pupils can learn skills independently, e.g., via stimulus and response generalization. Rigidly conceived procedures and materials ignore this fact (as well as a variety of other individual differences) and may result in lost time and negative attitudes which result from the error of "teaching" a pupil something he already knows or by forcing a pupil to cope with something which he will (can) not learn at the time.

With reference to skills, then, the teacher must have knowledge of the skills to be developed, but primarily in the general sense of a broad awareness of the structure of what it is the pupil is trying to learn. And, of course, the teacher must be able to initiate effective personalized procedures for developing such skills.

Personalization and the Hawthorne Effect

It is important to emphasize that the pupils and the teacher in a personalized classroom should perceive themselves as participants in an educational enterprise which encourages innovation and continued experimentation. It is such a perception which contributes greatly to increased enthusiasm and additional expenditures of effort. In this sense, personalized programs may be viewed as involving, in

great part, an institutionalization of the Hawthorne effect.[5]

While the Hawthorne effect usually denotes a temporary and deceptive effect, there is no theoretical necessity for the positive attitudes and increased behavioral output which result from being part of an experimental program to be temporary or deceptive in nature. The personalized classroom lends itself to the inclusion of such phenomena as a stable and positive aspect of the learning situation. What is being advocated is not complete novelty or novelty for its own sake, but a continuing emphasis on innovative practices in the classroom to help elicit and maintain teacher and pupil interest and effort.

To this end, the teacher in a personalized classroom facilitates a variety of success experiences and introduces novel changes in order to expose students to activities which may (a) arouse positive feelings associated with doing something important and "special" (in a positive sense), (b) arouse such intrinsic motives as curiosity and competence, (c) result in a focusing of attention of relevant stimuli, and (d) minimize boredom and tedium (and generate

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[5] The term comes from a series of studies done at the Western Electric Company's Hawthorne plant between 1927 and 1933. The investigations were designed to determine the impact of changes in the physical environment upon worker productivity. However, instead the findings pointed to the potent impact of social organization as overshadowing physical surroundings in determining productivity, e.g., production increases seemed to be the result not of improvements in the physical situation, but rather from increased morale (positive attitudes and motivation) among the workers which was attributable to the special attention they were receiving as participants in the investigation. As a consequence of these findings, the term "Harthorne effect" has come to denote a source of experimental error, i.e., temporary effects resulting from factors not intrinsically associated with the variables under investigation. For example, in education, Hawthorne-type phenomena often account for the initial success of new materials, methods, and curriculum content which later are found to lose their potency.

excitement and interest). If the teacher's efforts are successful in deviating from the humdrum and routine and in producing the feeling that the pupils (and teacher) are participating in a program of personal interest, relevance, and importance to others, then the classroom should tend to maximize Hawthorne-type phenomena.

Personalization and Remediation

Of course, even after establishing a personalized classroom environment, a teacher may still be confronted with pupils who continue to manifest occasional-to-chronic learning difficulty. For such youngsters, the teacher must be prepared to employ a variety of remedial strategies. Specifically, as has been detailed in chapter 3, the teacher may need to focus sequentially on up to three different levels of instruction, i.e., from the highest to the lowest level of instructional focus, the teacher may need to focus on (a) basic school subjects, (b) prerequisites to school learning, (c) pathological behaviors and/or underlying process deficits.

With reference to such remedial efforts, there is no theoretical reason why personalized classroom instruction (incorporating the systematic application of remedial strategies) cannot be accomplished within the framework of regular classroom programs. And, indeed, for the majority (but not all) of the pupils currently labeled as learning disabled, emotionally disturbed, educationally handicapped, and/or disadvantaged, it is felt that such a trend would be a more appropriate and effective approach to remediation than instruction in special classrooms or groupings.

Furthermore, as has been suggested, personalizing instruction

in regular classroom programs, especially in the primary grades, may be a potent means of preventing a large number of learning and behavior problems. Effective prevention, of course, is the best "remedial" strategy. And by reducing the number of pupils in need of remedial instruction, it should be possible to redirect sufficient resources to enable concerned professionals to improve the nature and scope of public school efforts designed to remedy learning disabilities.

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Chapter 6

A Personalized Classroom: in practice

In the preceding chapter, the general characteristics of personalized classroom instruction are discussed. In this chapter, the emphasis is on describing briefly the specific types of activity one might observe in a personalized classroom program. As in the preceding chapter, the program is described as it might occur in the context of a regular classroom. Aspects of the program, of course, would be modified in a situation where there are a number of Type III problems who cannot function without disrupting other pupil's efforts to learn or the teacher's efforts to teach.

For purposes of this presentation, personalized classroom activities are grouped into three categories corresponding to the three major phases of the program: the teacher-pupil planning phase, the work phase, and the culmination phase (see Table 1). In order to clarify further the various activities outlined in Table 1, this section is devoted to a description and annotation of an exemplary personalized reading and language arts class period.

* * * *

The following scenario takes place in a large metropolitan area school. The individuals involved are Mrs. Johnstone, who is in her second year of teaching, and her class of thirty 7-8 year olds.[1] Among

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[1] For a discussion of a personalized program designed for first graders and for older pupils who are still at the beginning stages of learning to read and write, the reader should see Povey and Fryer (1972), Lazar, Draper, and Schwietert (1960), and Veatch (1966). These sources also provide detailed discussions (step-by-step procedures) focusing on how to begin a personalized program.

TABLE 1

Three Phases in a Personalized Classroom Program

I. Teacher-Pupil Planning Phase

A. Announcements
B. Suggestions
C. Scheduling
D. Sign-ups for work peri[illegible] activities
E. Supply distribution

II. Work Phase

Pupils	Teacher
A. Independent "subject-related" study	A. Conferences
B. Group and/or independent skill building	B. Work with skill groups
C. Record keeping	C. Conferencing
D. Center and/or project involvement	D. Conferencing and aiding pupils involved in project planning

III. Culmination Phase

A. Clean-up
B. Evaluation
C. Follow-up
D. Requests
E. Sharing

these thirty pupils are youngsters of differing socio-economic status and ethnic background. Three pupils (Barry, Jenny and Harold) had manifested serious enough learning and behavior problems during the preceding school year that they had been considered for special class placement. As an alternative to such placement, they have been assigned to this personalized program.

It is 9:15 on a November morning ....

Mrs. J.: Let's begin the planning session.[2] (She points to the first item, ANNOUNCEMENTS, on a chart labeled, PLANNING.) Are there any announcements?

Craig: I've brought my printing press. We can start the printing center now.

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[2] The purpose of the planning phase activities is to enhance the physical and psychological "readiness" of the pupils and the teacher for subsequent activities, and equally important, to allow for pupil involvement in making decisions about such activities. That is, it allows for structuring subsequent activities, setting the stage, establishing the mood, anticipating problems, and so forth, as well as providing an important opportunity for pupils to practice being responsible (self-selective, self-directive) with regard to their learning experiences.

(As Veatch [1966] points out: "Planning has two faces. One can be the eager anticipation of those problems, goals, undreamed of heights revealed to teachers and children to stretch far beyond the first glimpse of possibility. The second face is that of the ugly laborious, step-by-step plodding through slow-paced demands for 'order and system' and a maniacal insistance that such action leads to perfection." ... "Great teaching consists of instant, wise, intuitive adjustment to the moment. Planning as fetish will wring the juice out of learning...."

Such planning sessions might be employed several times a day or only at the onset of the day. If used only at the onset to establish the day's activities, the session might last approximately 20 minutes; otherwise 10 minutes can suffice to structure a particular work period.

For such a planning period to be meaningful, of course, there must be <u>real</u> opportunities for pupil input. This means the class structure must be open enough to allow pupils to suggest additions, deletions, and other modifications of existing organization and procedures. This should not be interpreted as suggesting total removal of all restraints (no structure) or that the teachers must accede to every suggestion. Rather, what is involved is the establishment of (a) the type of freedom which evolves from increasing the range of alternative choices and (b) the type of security which stems from setting a realistic and rational framework, e.g., a structure with a wide range of positive choices, and with limits which pupils understand and accept.

Kim: Can we begin a class newspaper now?

Mrs. J.: Yes. Those who have been talking about producing a class newspaper should plan to meet during project time.

Ron: I brought my dinosaur and snake books if anyone wants to read them. I put them in the book corner.

Mrs. J.: Thank you, Ron. Brad has been wanting to read about snakes, and I'm sure others will enjoy the books, too. Perhaps during sharing you would like to tell us more about them. (Brad indicates he would.) I've also brought some books. I took back the library books that were due, and I checked out these.[3] (She displays all the books, stopping to indicate a book someone has asked for and to call the attention of specific pupils to books in which she thinks they might be interested.)

Here's a book that tells about a boy who gets captured by a band of pirates. Barry has been asking for books about pirates, and I'm sure some of the rest of you will find this an exciting story.

This book is about Africa. Just look at these pictures. I love the one showing the chimpanzees and here's one showing a lioness and her cub. Is this the type of book you were wanting, Sheila? (Sheila indicates that she would like to look at it.)

I also wanted to let you know that our new copy of Merry-Go-Round

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[3] Most teachers who have changed from normatively oriented personalized classroom programs have found that, after the initial period of collecting materials and restructuring their programs, they have not had to spend any more preparation time than they had previously. What is different is how they spend their time (e.g., looking for appropriate books and materials rather than correcting papers and preparing detailed lessons).

magazine has arrived. There are some fun games and riddles in it, and a picture story about the book The Red Balloon. Has anyone here read that book or seen the movie? (Several youngsters have.) Did you like it? (Heads bob up and down to affirm they did.) You know, I've read that book several times, and you know the part I love best? It's when all the balloons in town come to save the little boy when the big boys are trying to take the red balloon from him. Well, perhaps some of you will want to look at this picture story or maybe go to the library and get the book.

...

Mrs. J.: Are there any other announcements? If not, let's move on to suggestions. (She points to step 2 on the chart.)

Lisa: Could we build a puppet theater for our puppet shows?

Mrs. J.: That sounds like fun. Are there others who want to build a puppet theater? (Peter, Jenny, and Rachel raise their hands.) Lisa, why don't you and Peter, Jenny, and Rachel have a meeting during the project time to discuss this. I will meet with you for a while too.

...

(There are no other suggestions, so Mrs. Johnstone points to items 3 and 4 on the chart -- SCHEDULINC and SIGN-UPS.[4])

Mrs. J.: I will be holding conferences starting at 9:30. Who wants to sign up? (Ten pupils raise their hands and are listed on the

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[4] The time required for scheduling and sign-ups diminishes as the class establishes a basic pattern for the program. Once this occurs the emphasis is on clarifying the specific times when activities are to take place and on signing-up for these activities.

blackboard.)

...

Mrs. J.: During skill building time, there will be two skill groups meeting, one working on initial consonants and a comprehension group. Some of you have already signed up for these groups when you had your conference this week; is there anyone else who wants to attend one of these groups? (Several pupils raise their hands and are listed on the blackboard.) Those others who have been working on initial consonants should find five words which begin with the consonant sound you are working on; the rest of you should write down in one or two sentences something telling about what you read, such as the main idea or what you liked about it.

Any questions? (There are none.)

O.K. Who wants to go to the science center today? (Eight students raise their hands. Since the center is only big enough for six, she gives preference to those who have not been to that center recently and to those who have some other particular reason for wanting to go there today. She follows the same procedure until all the pupils who want to have signed up for a center. Some, of course, could not get to the center they wanted and have had to take a second or a third choice.)

...

Tom: I've been trying to get to the clay center all week.

Mrs. J.: Is there someone who has signed up for clay who would be willing to go to the listening center where Tom is scheduled to go or to do something else?

Sheila: I will.

Mrs. J.: Thank you, Sheila.

Now according to our calendar of special events, during sharing time today, Alice and Harold will be doing their magic show. I've seen them preparing all week and from what I've seen, we've got a fun-time in store for us.

Well, that seems to take care of the scheduling and sign-ups. Are there any questions or problems? (There are none.)

If you need supplies, please get them now.

Joe: Mrs. Johnstone, did the new typewriter ribbon come? (Joe is responsible for the writing center this week and therefore, is concerned over the maintenance of the typewriter.)

Mrs. J.: Oh yes. I'm glad you reminded me; it's on my desk. You and I can put it in the typewriter while the others get their supplies and settle down for quiet work time.

...

After helping Joe to replace the ribbon and helping a few other pupils to settle down to their work, Mrs. Johnstone goes to her desk where Nancy is waiting for her conference.[5] Mrs. J. puts a sign on

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[5] As in any classroom, work phase activities are intended to facilitate learning. In contrast to more normatively oriented programs, however, the work period in a personalized classroom is structured so that the majority of each pupil's time is devoted to activities which do not require him to interact with the classroom teacher. This frees the teacher to spend her time in conference with individual pupils and meeting with small groups (e.g., skill building groups, interest groups). And, it also allows pupils to think, explore, and practice without others, and concommitantly, it allows them to develop the ability to do such thinking, exploring, and practicing independently. As Veatch (1966) points out, in this way, they can "develop the concept that learning is a highly personal act, and works best when the purpose lies within the learner." As an example, with reference to an independent reading period, the youngster is

the front of her desk: CONFERENCE IN PROGRESS. PLEASE DO NOT DISTURB.[6]

During this transition phase, Harold leaves the room, as he does each day, and reports to the Learning Disability teacher's room where his learning difficulties are given special attention. (Harold is only able to cope independently with reading or writing tasks for 5 minutes.)

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expected to read silently for as long as he can. (He can change books if he wants.) And then, "When he is 'read out,' so to speak, he proceeds with whatever plan he has made. It might be intensive study of a story to present to his teacher in an upcoming conference or it might be developing a report to present to the class on certain materials or experiments during sharing time. It might be polishing a skill from another curriculum area.... There are limitless possibilities. But whatever he does, he is quiet and independently occupied..." (Veatch, 1966).

Of course, such independent work must be meaningful, interesting, worth the effort, and attainable, without teacher intervention, through the expenditure of an appropriate amount of effort. Busy work will not do; it leads to groans and avoidance behaviors which usually mean trouble.

To develop this structure, most teachers find it necessary to help pupils learn how to function appropriately without interacting with the classroom teacher. Again, with reference to a reading period, it has been found to be helpful to begin with 5 minute sessions where pupils are asked to sit and read independently. (If they do not know a word, they can turn to a neighbor and point to the word; if the neighbor cannot supply the word, the pupil skips it and goes on reading.) Role playing is a good way to help the pupils learn such procedures. The time period gradually is increased, and other "supports" are added, such as identifying certain pupils as aides who will provide words, establishing reading partners so that a poor reader is working with a good reader, importing tutors from higher grades, and so forth. Using such approaches, most elementary pupils in the 7-12 year old range should be able to function independently on subject related tasks (e.g., look at a book, write a letter, draw and label) for 30 minutes; younger pupils should be able to function in this way for 15-20 minutes. The length of the period, of course, will vary for different individuals. The point is that any youngster who can function within the basic limits stated earlier should be able to develop, gradually, the ability to perform relatively autonomously.

(A similar type of training is needed with regard to other work period activities in order to ensure a high degree of pupil self-selection, self-direction, independence, self-evaluation, and interpersonal cooperation.)

For a more detailed discussion of how to help pupils learn to work independently see Povey and Fryer (1972) and Veatch (1966).

[6] "The individual conference is the peak, the apex, the climax, the high point of the instructional reading program. Everything that

Most of the remaining class members are reading silently -- some in chairs at desks, some sitting on the carpeted area in the book corner. A wide variety of reading materials are in evidence -- hard back and

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comes before leads to it. Everything that comes after should be determined by what happens in it" (Veatch, 1966).

Conferences provide a unique opportunity for mutual sharing by the teacher and a pupil. It should be an enjoyable 5-10 minutes during which the youngster (and, concomitantly, the teacher) discovers his strengths, experiences learning (e.g., to read) as a rewarding activity, and experiences the teacher as a warm and interested person who is concerned with and appreciative of the pupil's efforts. The focus of the conference is on what the pupil has been doing successfully in class. (As Povey and Fryer [1972] state: "The conference can be used as a testing situation, yet the child can perform better and the teacher can learn more if he, the teacher, plays more the role of an avid listener and sharp observer who is bending all his efforts toward enjoying this chance to share something important with his students." Furthermore, these writers suggest "it is much more effective to find something he did correctly and help him to understand how he can generalize this [such as finding a word he spelled correctly that fits a general pattern and finding other words that fit the same pattern."] Veatch [1966] suggests that the pupil be encouraged to select and prepare something to present to the teacher at the conference; such a procedure should guarantee a high degree of success for the pupil.) To this end, the pupil brings to the conference some representative portion (a small sample) of his work, e.g., his records, journal, any special assignments, something he has read that he wants to read to the teacher and/or discuss, and so forth. (If a pupil does not seek a conference or does not bring a representative sample of his work, he can be encouraged to do so, and if he still does not cope appropriately, assignments can be made.

As a product of the conference, the teacher will find out a good deal about what the pupil is (and is not) able to do and what he has (and has not) been doing. With reference to a reading conference, Lazar, Draper, and Schwietert (1960) state: "The child and the teacher might discuss the choice of the current or future books; explore the child's feelings toward a book; discuss and plan possible follow-ups. The child might read orally and explain why he selected a particular passage...." "Through the individual conference the teacher may gain a picture of the child's knowledge of the book's general content, check the child's understanding of the exact meaning of specific passages or chapters, single out some words in order to check upon the child's independent use of word attack skills, and single out a number of words for discussion, perhaps with the whole class, to develop deeper meanings or for the joy of sharing interesting words.

(continued)

paper back books, magazines and newspapers; the topics encompass fiction, riddle, joke, and cartoon books, sports, and how-to-do-it books (how-to-do-science experiments, carpentry, sewing, cooking, plays, magic, paper folding). Some of the books not in use are in book racks and on the chalkboard and window ledges where they can be visable and attractive; the rest of the books are in the book

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During the individual conference, the teachers may help the child then and there with his particular problems. She may develop a specific skill plan for developing certain other skills with the child at a future date, or make provision for practice assignments. In general, through the medium of the individual conference many specifics are fused: diagnosing, teaching, listening, sharing, evaluating, discussing, planning, and learning."

As the conference proceeds, records should be kept. However, such records should only encompass information needed in following up with the pupil or reporting to parents, principals, and so forth. And, of course, what is recorded should be shared with the pupil so that he will not be so threatened by the fact that notes are being made.

It is common for a teacher to use a conference to talk over a problem and to encourage a pupil to try something new or attempt an activity he has been avoiding or attend a particular skill group or do a special assignment, and so forth. The form of conferences is similar for all pupils, but the content, the discussion, the learnings, and the teaching, of course, are different.

While the time devoted to a conference cannot be rigidly adhered to, it is important for the teacher to make a concerted effort to keep things moving. Conferences are an important activity for all the pupils, and unless the teacher pushes on, she will not be able to see pupils individually very frequently. The teacher who is conscious of this fact will work to learn how to make conferences both effective and efficient. (I use the latter term guardedly.) The frequency of conferences with a particular pupil varies with class size and pupil need. Some teachers (with classes of 35-40 pupils) have been able only to manage one conference per pupil per week; in such instances, however, the teacher keeps contact with pupils during the planning and closing activities and during group work (skill and project groups). In addition, the teacher may have a message center where students can put urgent messages and requests which they feel they need to communicate before their next conference. (Povey and Fryer [1972], Lazar, Draper, and Schwietert [1960], and Veatch [1966] provide more detailed discussions of how to plan and implement conferences.)

corner (which consists of some low book shelves and a 9 X 12 rug).[7]

Not all the students remain focused on silent reading. Jack sits for about five minutes looking around; everyone near him is involved in independent activity, mostly reading. Finally, he opens a book and reads. (Was it because there was no one with whom to interact? Was it because others were setting a good example?) Jenny looks at a picture book briefly; then she reviews some Key Vocabulary words, writes a brief letter (with the aide of a picture dictionary and a neighbor), and draws some pictures.[8] (Because Jenny is still

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[7] Most teachers who have personalized programs find that a sufficient number of appropriate books and other reading materials may be borrowed from such sources as the school library, the school district library, the public library, book mobiles, the pupils themselves and/or their parents. Others use book fairs, book swap meetings, etc. to supplement the above sources. There should be about three to five times as much reading material (e.g., books, newspapers, magazines) in the class as there are pupils. These materials should include a goodly number of desirab e things which the least competent readers can read with ease, as well as things which will be desirably challenging to the most competent readers, i.e., the material should vary in difficulty, format, theme, and style. The specific selection of materials, of course, is based on what the teacher knows, normatively, about the types of youngsters enrolled in her class and on what she knows specifically about different pupils.

At the beginning of the program, Povey and Fryer (1972) find it helpful to bring materials to class in boxes and to empty the boxes on about six different desks spread throughout the room. The pupils then are given the opportunity to browse among these stacks of materials until they find the one thing they want to read. The teacher, of course, helps those few pupils who are unable at that point to self-select. Lazar, Draper, and Schwietert (1960) relate that one of their teachers found it useful to include provocative signs along with displaying the books, e.g., "Scientists Sit Here!" "Who is Horton? Freddie?" "Have you seen this space ship before?"

[8] The Key Vocabulary method was developed by Sylvia Ashton-Warner (1963) and expanded upon by Sawicki and her colleagues (1969). It is a potent method for helping a pupil develop a relevant basic sight vocabulary and learn letter names and sounds. The essence of the approach is that of allowing the youngster to learn as his first reading words those which have intense meaning for him. These words then are used in his writing and to help him with beginning word attack skills.

functioning on a beginning reading level, she has manifested difficulty in reading independently for as long as most of the others. Therefore, Mrs. Johnstone has suggested that Jenny read as long as she can and then write and draw, or do some other independent activity. Jenny, at first, did not know what to write about and, of course, had a rather limited writing vocabulary. To encourage her and give her some focus, Mrs. Johnstone wrote her a letter about some mutual interests and ended it with the suggestion that Jenny might use some of the independent reading time to respond. Then, she had a conference with Jenny to help her read the letter and get started on a response.) Barry and Jeff (two particularly restless readers) also have special activities which have been worked out with the teacher. Jeff spends the first ten minutes reading and then goes to tutor a younger pupil in another room -- an arrangement found helpful to all concerned. Barry has some special follow-up activities, such as developing new reading games, which he enjoys doing.

(Mrs. Johnstone's goal clearly is to plan an appropriate reading-related activity with each youngster so that all pupils can function profitably and independently during this period. Another example of this is seen with reference to Carlos and two other pupils who speak primarily Spanish; for them she has located books written in Spanish and some which are written in both Spanish and English. In this way, the pupils in her class can maintain their motivation and task focus and do not disturb each other.)

Most of the period is devoted to silent reading. (Shirley encounters a word she doesn't know so she holds her book over by her

neighbor, Sam, and points to the word; Sam tells her the word and they both return to their reading.)[9]

By ten minutes before the independent reading period ends, all the pupils have shifted in order to meet with their partners for oral reading.[10] They take turns reading to each other for five minutes each. (The book a pupil uses when reading orally is not necessarily the one he uses during silent reading time.) Several pupils are reading stories to each other; others are reading jokes and riddles; several pairs are grouped together and are reading a play.

As a pupil completes his reading, he begins his daily writing activity. Each pupil has a "book" (journal, log, diary) in which he can (and is expected to) write whatever he likes.[11] Again, when a

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[9] At the younger age levels, some teachers find it helpful to arrange for upper grade volunteers to be available as a resource for providing words. Another arrangement involves the identification of certain pupils as resources for this need.

[10] Povey and Fryer (1972) include daily oral reading practice through the third grade and with some older children. Until most of the children in the class have made a start, they use older pupils as tutors. They found that by mid-year most 2nd grade classes could be organized into partners. The pupils were paired on the basis of their desire and ability to work profitably together.

[11] The emphasis in writing in a personalized classroom always is on the idea that writing is a good, enjoyable, and often exciting and creative way to say something. Furthermore, it has been suggested by many educators that frequent writing is a valuable tool for improving reading (and spelling) since the more practice one has using words, the more likely the development of the ability to visualize words quickly and easily. The problem for the teacher is one of how to encourage both quantity and quality. If she makes corrections (e.g., of content, style, mechanics of English, handwriting), she is likely to discourage some pupils to the point of reducing their productivity; if she ignores these matters, she is likely to see errors repeated frequently. It is recommended that the teacher respond to what has been written with positive comments (on a separate sheet of paper if a student prefers

pupil has some difficulty, he freely asks a neighbor or a specified monitor for help. Joe prefers to leave blanks when he doesn't know a word. Stephanie writes down the beginning and other letters she thinks are in the word. Several students use the dictionaries which are available (including picture dictionaries). Mrs. Johnstone also has put up a number of word charts which are used for reference (lists of the days, months, frequently used words, and so forth). Jenny has written a letter during reading time and uses this time to copy several jokes and riddles from a book.[12] Jim wrote a story about a rocket ship. Sally chose to write in her journal and related in diary-like fashion what had happened to her on the day before. Several pupils went to the writing topic file to find a topic of interest. (This file consists of 3 X 5 cards prepared by Mrs. Johnstone and sorted into categories such as adventure story topics, sports, poetry, letters, animals, the seasons, etc. Each card has some vocabulary words related to the topic, a few possible titles, and some cards have unfinished introductory sentences, e.g., The dog came running from...)

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not having his book marked up); in addition, she should note in her records, observations regarding ways she might help the pupil (during conferences or in skill groups or through the use of a cross age tutoring situation, etc.). With regard to helping the pupil, Povey and Fryer (1972) found that as pupils read their own writings aloud and listened to others read aloud, their awareness of good writing skills increased, and they learned to listen to and respect the ideas of others. Povey and Fryer also found that many youngsters could be encouraged to copy a piece of work over into proper form before sharing it with others. (Copying also is seen as providing a sense of security for some pupils during the initial phases of a writing program.)

[12] On another day, the teacher might include Jenny in a dictation-type activity, i.e., one in which what Jenny says is written down. For example, a conversation in which she is involved can be written down or she can simply dictate a story. The written product (printed or typewritten) subsequently can be read by Jenny -- at first with help and later re-read at will.

Some pupils are finished in five minutes; others write for the entire 15 minutes which have been allotted for this activity.

At 10:15, the time allotted for writing ends and the focus shifts to skill building. Mrs. Johnstone ends her conferences temporarily in order to meet with the skill groups which are planned for the day.[13] She has assigned several pupils who are quite proficient with regard to initial consonants to begin working with the group which has needs in this area; she begins with the other group. The remainder of the class pursues the assignment made earlier, as well as various individual skill building activities which the teacher has suggested to the class in general or to the pupil individually in conference.

Skill building is a ten minute activity on this day.

At the end of 10 minutes, each pupil records his accomplishments to that point. Pete takes out a small composition book in which he is keeping his cumulative record. He enters the title and author of the book he began that day, and the pages he read. Joe's reading entry shows similar information, as well as some comments about what he read. (He started a book about dogs, but he didn't like it; then he found a riddle book which is "lots of fun".) Martha indicates she wrote a poem about a friend today. Then, she found five words beginning with the initial consonant "S" (sun, some, Saturday, send, sand).

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13 Whenever two or more pupils have a similar need, interest, or goal, grouping is possible and usually desirable. (Veatch [1966] has a good chapter on grouping.)

The record keeping done, the pupils move to their centers and projects.[14] Harold returns from the Learning Disability teacher's room at this time. Mrs. Johnstone meets with the group who want to build a puppet theater, and leaves after five minutes satisfied that they can proceed independently. She surveys the rest of the class and sees that the newspaper project group is meeting, Alice and Harold are "putting the final touches" on their magic show, pupils are at the science, listening, clay, sewing, and painting centers, and one or two pupils are sitting at desks doing autonomous activity. No one seems to need her help, and so she lets Barry know that she is ready to resume conferences. (He is next on the list.)

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[14] The purpose of centers and projects is to allow for the practice of acquired skills, the acquisition of new skills, and, hopefully, the pure enjoyment of participation in an activity. Such centers and projects can be restricted to activities which are directly related to such basic school skills as reading and such academic subjects as science and math, or the activities can be broadened to encompass carpentry, cooking, sewing, music, art, drama, and so forth. (At younger ages, e.g., 3-7, centers might reproduce home and nieghborhood activities such as having a home corner, a post office, a restaurant, a bank, a grocery store, and various other shops.) Some teachers prefer to have only centers where the noise level will not interfere with their concentration while in conference or with the efforts of pupils who are involved in some activity which requires a low decibel level.

To optomize the effectiveness of such activities, it is recommended that the pupils be involved in setting up and maintaining the centers. Also, it should be noted that too many materials introduced all at once can be confusing; therefore, a limited number of materials should be introduced initially and as new materials are added, materials which have been in the center a while should be rotated out. Some of these materials can be rotated back into the center at a later date if it is felt that there will be renewed interest in them at that time. (Povey and Fryer [1972] and Veatch [1966] are good sources for learning how to set up and supply centers.)

11:30 -- With thirty minutes left in the period, it is time to begin the culmination activities.[15] The youngsters move rapidly to put the room in order. Each pupil straightens up the immediate area in which he is working, and then returns to his desk to straighten up there and begin the evaluation activity. (While the evaluation is getting underway monitors who have accepted a week's responsibility for the specific centers check to see if additional cleaning or replenishing is needed. After completing this assignment, they, too, join in the evaluation.)

Mrs. Johnstone asks the class if they liked how things went today.[16] Some pupils did and they tell why. There are some complaints -- ("Craig wouldn't let us run the printing press." "We don't have the right materials to build a puppet theater.") -- and these are explored in a problem solving fashion. ("What are some things we can do to solve this problem?)[17]

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15 The culmination activities are critical to developing responsibility, evaluative abilities, cooperative attitudes, and excitement and interest for the future.

16 Evaluation, of course, is going on throughout the school day -- in conferences, in groups, etc. Pupils want and need feedback to know how they are doing and to figure out what they should do next. In a personalized classroom, the emphasis continuously is on helping pupils develop the ability to be self-evaluative. Povey and Fryer (197) find that "As children understand the procedures of evaluation they are more able to tune into things they would like to see changed, and what steps they can take to do something about it. This generalizes to their own work as well as group work. The student is given the opportunity to realize that he has some control over decisions that affect him, which can lead to the important discovery that in the long run the person most important to please is himself."

17 Among the special techniques which have been found to be helpful in this connection is role playing, for it helps pupils to learn to anticipate, as well as solve problems.

After evaluating the period, there is a brief follow-up on the initial consonant assignment which had been made earlier that morning. Mrs. Johnstone asks about a dozen different pupils to tell one of the words they had written down during the skill-building activity. She writes the words on the board underlining the initial consonants.[18]

After the follow-up, a few minutes are devoted to hearing and trying to fulfill requests. Jane wants to find a book about horses. Jack recommends one to her. Harry would like to build an animal cage, but he needs some chicken wire and wonders if anyone has some they could bring. The class members decide that they will ask their parents to see if anyone can donate enough wire for the project.

Then, it is sharing time.[19] Bob reads a poem he has written in his journal.

BUTTERFLIES

Butterflies always appear during spring.
I had a butterfly in my hand.
It was a black butterfly.
I caught a butterfly in a jar.
I caught a butterfly with my bare hands.
Butterflies are beautiful.

[18] Some teachers like to have written follow-ups, using teacher-made worksheets or selecting a specific page from a workbook. In such instances, the teacher needs to build up a file of appropriate exercises so that she simply can draw upon them as necessary to meet the needs of individual pupils.

[19] Sharing is intended as an activity which will add pleasure and excitement to the period, as well as one which facilitates the development of academic, personal, and social competence. While pupils may be reticent at first, through encouragement and suggestions the teacher can elicit real communication of ideas, thoughts, feelings, accomplishments, and so forth. Of course, not all sharing needs to be orally presented. Work can be shared by putting it on a bulletin board or in some other special place for display. (It should be noted that in beginning reading programs the term sharing takes on additional importance and meaning.)

Terry has a poem too.

I

I am an am if I am.
I am an am
Because I said I am.

Peter reads a story he wrote in which he has a baseball telling about a baseball game; this evokes a discussion about this technique (i.e., having an inaminate object talking). Ron tells about the dinosaur and snake books he brought to class. Alice and Harold do their magic show.[20] Bill tells about a book he has just finished reading and reads an exciting passage from it.[21]

Before any of the youngsters seem to realize it, it is 11:30 and Mrs. Johnstone calls the proceedings to a halt.

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[20] This is the time when any special project might be shared, e.g., a play, something which has been constructed, etc. Such preparations expose the rest of the class to different ideas and give the pupils who prepared the project the experience of presenting something to the class. (Obviously, this is intended to be a positive experience -- not a trial under fire.)

[21] If books are to have a positive status with youngsters, pupils must help to give them such status. Sharing is one way to help accomplish this goal. There are various ways for such sharing to occur, but the key to all of them is that the pupils who have read and enjoyed a book must be given an opportunity to communicate to their peers why they think others would enjoy what they read. (Povey and Fryer [1972] and Veatch [1966] offer a good discussion of sharing.)

Some Key Readings Relevant to Personalizing Instruction

Noar, G., Individualized Instruction: Every Child a Winner, New York: John Wiley and Sons, Inc., 1972.

This short, easy to read, paperback is full of relevant, practical advice and how-to-do-it ideas. The author's intention is to provide some answers which can help in efforts to teach "individual children in a class of thirty or more who are far below grade level while others are far above", especially non-readers and youngsters who aren't "turned on" to school learning. The focus is both on elementary and secondary education. The topics covered include: learning to learn (by looking, hearing, talking, reading, doing, writing, role-playing), adapting to individual differences, behavior-discipline, grading, competition, motivation, and so forth.

Dunn, R. and Dunn, K., Practical Approaches to Individualizing Instruction. Contracts and Other Effective Teaching Strategies, West Nyack, New York: Parker Publishing Co., Inc., 1972.

This book is particularly helpful because of its emphasis on techniques which can be used by teachers "who wish to begin the individualization process slowly" and because of its emphasis on a curriculum which is designed to include "student interaction, peer sharing, small-group techniques and independently designed learning contracts". There is a step-by-step discussion of how to develop such a program. Among the topics not covered in the other sources cited here, there is a chapter devoted to group process techniques, one on simulation and role playing, and another on brainstorming and problem solving.

Ashton-Warner, Sylvia, Teacher, New York: Simon and Schuster, 1963.

It's fascinating; it's stimulating; it's extremely worth reading (you can read it in about an hour). In this exciting little paper-back book, Ashton-Warner explains her approach to teaching reading, writing, arithmetic, and nature study. The youngsters she was working with when she developed her approaches were Maori children (and their English counterparts) in New Zealand. Her experiences alone are worth reading, but the fact that these are paired with descriptions of her practices makes this book an important reading experience for all teachers.

Povey, G. and Fryer, J., Personalized Reading - A Chance for Everyone, Encino: International Center for Educational Development, 1972.

This resource originally was developed as part of a research project co-directed by my colleague Seymour Feshbach and myself and later published by ICED. One aspect of the project was to develop a workable personalized reading program for inner-city (disadvantaged area) schools where reading problems were widespread and chronic. Just such a program was developed by the two exceptional teachers who wrote this book, Gail Povey (formerly Ennis) and Jeanne Fryer. These two have worked for many years with children with learning and behavior problems from both high and low income families and from different ethnic backgrounds. It is their belief that the types of practices presented in their book will be appropriate and sufficient in providing classroom instruction for most public school pupils. The procedures described have been used by teachers in disadvantaged area schools and those teachers report great satisfaction.

The topics covered are book collection, self selection, silent and oral reading, record keeping, daily writing, centers and projects, planning and closing sessions, comprehension and word attack skills, conferences, key vocabulary, writing centers, books for beginners, writing down children's speech, reproducing household and neighborhood activities, and reading aloud to older children (e.g., cross-age tutoring).

Veatch, Jeannette., Reading in the Elementary Schools, New York: Ronald Press Co., 1966.

As should be evident from the frequent references to Veatch's book in the footnotes of this chapter, it (Veatch's book) is seen as a major resource for anyone who is interested in personalized classroom instruction. The author provides guidelines for getting ready to begin such a program, undertaking the first steps (both with beginning and more advanced readers), and proceeding with the day-by-day program. After the introductory and background chapter, there are chapters on: "The Independent Work Period", "The Individual Conference", "Grouping", "The Child Views his Progression in Learning to Read", "Beginning Reading", "Reading at the More Advanced Levels", "Teaching Skills for Reading", "Evaluation, Record-Keeping, and Testing", "Sharing", and "The Beautiful World of Books".

For the teacher who would rather listen than read (and who has the use of a cassette audio tape recorder), there is a set of tapes

available for purchase through the Listener Corporation (6777 Hollywood Blvd., Hollywood, California 90028). On these tapes, Veatch relates the ideas which are to be found in her book. The tapes have 5 parts: "I. Introduction and Rationale, II. Mechanics and Practical Helps, III. Beginning Reading, IV. Individual Conference and Grouping, and V. The Teaching of Skills."

From either of these resources, a teacher will be exposed to a wealth of practical techniques for classroom instruction, in general, and personalized classroom instruction, in particular.

Sawicki, Florence; Barenetter, Eleanor; Blakey, Janis; and Elliot, Geraldine, Key Words to Reading, Chandler, Arizona: The Chandler Arizonian, 1969. (P. O. Drawer 368, Chandler, Arizona 85224 is where this resource can be purchased).

After reading Ashton-Warner, Veatch, and Povey and Fryer, this resource will be found to be extremely helpful for clarifying how the Key Vocabulary, interest centers, self-selection in reading, and various personalized classroom practices have been integrated into classrooms in Chandler, Arizona. This is a good example of the "language-experience" approach in action. Specific chapters are offered describing the Key Vocabulary, Classroom Management, Skill Development, Writing (mechanics, and spelling, and written expression), Grouping, Evaluation Techniques, Children's Literature, and a final chapter entitled "Storehouse of Ideas" which is just that.

(Since the Key Vocabulary has been mentioned a number of times in this chapter, a few words seem appropriate here to clarify this approach. The technique is based on the notion that a child will learn best those words which he view as important and powerful. Thus, he is asked to tell the teacher such a word. The words generated in this way are written by the teacher on cards and become sight words for him to practice and recall. He is told to do something active with the word, e.g., write it on the blackboard or in a story. Thus, his own words become the bases for building a sight-vocabulary. This approach can be contrasted with approaches where the words to be learned are generated from sources other than the child and thereby often have much less meaning or interest for the youngster. The Key Vocabulary words are words the pupil wants to learn and words which relate to his own life. (For this reason, the teacher must be prepared to accept every word without judgment.) With these words as a basis, the pupil can begin to write independently (especially with the aid of self-help charts and illustrated dictionaries), and they can learn spelling, phonics, and punctuation as they find they need these skills. Again, the emphasis is on meaningfulness and usefulness, i.e., rather than learning skills generated by basal test or workbook lessons, they learn those skills they find necessary for doing the activities in which they have become interested.

Lazar, May, Draper, Marcella K., and Schwietert, Louise H., A Practical Guide to Individualized Reading. (Educational Research Publication #40.) Printed by the Board of Education of the City of New York, 1960. (This monograph may be purchased from the Bureau of Educational Research, Room 732, Board of Education, 110 Livingston Street, Brooklyn, N. Y. 11201.)

Many classroom teachers have found this to be a very helpful resource. There are seven chapters: an overview and 6 special reports. The special reports are: "Effective Classroom Practices in Individualized Reading", "Individualized Reading and the Reading Skills", "Problems in Individualized Reading", "Individualized Reading at the Beginning-To-Read Stage", "Individualized Reading and the 'Slow' Reader", and "Evaluation of Individualized Reading". As has been noted throughout this chapter, the three authors have presented interesting and helpful discussions of topics such as conferences, grouping, teacher-pupil planning, record-keeping, beginning reading, and skill building.

This chapter and the above references focus primarily on personalizing classroom instruction with regard to reading and related writing activity. After successfully implementing a personalized program in these areas, the teacher may be interested in personalizing the classoom program with regard to other subject areas and eventually personalize all aspects of the program. In such instances, the following resources should be of considerable interest.

Darrow, Helen F. and Van Allen, R., Independent Activities for Creative Learning, New York: Teachers College Press, 1961.

While this resource was not referred to previously in this chapter, it deserves special note here. Darrow and Van Allen's suggestions will help teachers avoid involving their pupils in busywork while they (the teachers) are busy conferencing. The orientation throughout the book is on developing skills (communication skills, skills of social living and interpersonal relations, and skills of reference study and scientific and mathematical reasoning) through activities which are viewed as promoting creative self-expression. The book's four chapters are entitled: "Action for Independence", "Organizing the Daily Program for Independent Activities", "Independent Activities which promote Creative Learning", and "Using Skills Through Self-Expression". Suggestions are given for organizing the classroom for independent activities and many specific activities are described. Importantly, the activities described require a minimum of teacher-preparation, and the needed materials are readily available and not expensive.

Voight, R. C., Invitation to Learning: The Learning Center Handbook. Washington, D. C. : Acropolis Books Ltd., 1971.

While several of the other references annotated in this section discuss centers, none offers as comprehensive a set of examples as does this resource. The book is divided into four sections. Part I is an introduction which briefly suggests the historical and current contexts for such activities, as well as a classification scheme. Part II

is devoted to a discussion of implementation, covering such topics as transitioning to centers, keeping centers meaningful, specific materials, record keeping, conferences, reporting to parents, and so forth. Part III presents specific examples of: furniture usage; beginning experiences; center display area; center work conference; individual reading conference form; schedules; and a variety of different types of centers (inventory, prescriptive, project, cooperative, single skill, multi-skill, and fun learning centers). Finally, Part IV is the author's formulation and answers to a varity of pertinent questions about center "invention".

In general, this handbook is a valuable practical aid which can help in organizing a class to accommodate the individual differences of both the learners and the teachers. The experiences described can actively involve pupils in the learning process and are designed to allow him/her to pursue such learning independent of direct teacher supervision.

Glasser, J. F., The Elementary School Learning Center for Independent Study, West Nyack, New York: Parker Publishing Co., Inc., 1971.

The learning centers discussed in this book are centers designed to serve a whole school (as contrasted to a specific classroom). The author states:"The Learning Center aims to provide a school framework within which the individual child may procure the guidance, climate and media to learn and find purpose and joy in learning". The book is designed as an aid for those who want to "initiate and/or develop" such a center. The table of contents provides a good description

of topics. The major focus is on clarifying the rationale for and describing how to establish, staff, design, equip, and evaluate such centers and independent study programs.

Moffett, James., A Student-Centered Language Arts Curriculum, Grades K-13: A Handbook for Teachers., Boston: Houghton Mifflin Co., 1968.

This resource is a natural, important, and exciting (and easy to read) companion to the references on personalized reading which have been presented above. Moffett's curriculum model for language arts emphasizes the use of language as social communication and thus sees oral and written language as being at the center of the educative process. In Moffett's words: "The program thus outlined is meant to be integrated both in the sense that continuity is sustained from one general stage of growth to another and in the sense that reading, speech, literature, drama, composition, and language are learned by means of each other and interrelated to the point of effacing some conventional categories of the field." He continues: "I would like to produce a way of teaching the native language that requires almost no textbooks or materials except reading selections and that, indeed, offers an alternative to the installation of a prepackaged curriculum. Featuring the learner's own production of language, and not incarnated in textbooks, this curriculum adjusts automatically to the students at hand." The book is divided into four parts, with each part focusing on a different age level, i.e.,

kindergarten through third grade, grades 4 through 6, grades 7 through 9, and grades 10 through 13. In the first part, there are chapters describing "acting-out" (dramatic) activities (e.g., dramatic play, pantomime, acting-out stories), "speak-up" (discussion) activities (e.g., unstructured and structured discussions, "grouptalk" panels), reading-related activities (e.g., the teacher's role, dramatization and discussion, individual silent reading), and a great variety of writing activities grouped under chapters intriguingly entitled "Writing Out", "Writing Down", and "Writing Up". There also is a chapter on playing games of language and logic. Each of the subsequent parts of the book deals with activities for "acting-out" (e.g., games, plays, speaking, improvisation, monologues, poetry reading) and writing (e.g., sensory writing, memory writing, fiction, ideas, dialogues and monologues, narratives, poetry, autobiography, reportage and research).

Nuffield Mathematics Project. Published for the Nuffield Foundation by W. and R. Chambers and John Murray, John Wiley & Sons, Inc., New York.

The teacher who wants to personalize mathematics instruction will find this series a remarkable resource. While the curriculum which has been developed during this project is described as a "contemporary approach for children from 5 to 13", the materials, activities, and general approach to learning and teaching are appropriate for older pupils who manifest difficulty learning math. The series is discovery-oriented and is based on the idea that pupils must handle things before they will be able to deal effectively

with abstractions. The stress is on the use of everyday and non-mathematical subjects, materials, and situations to illustrate mathematical concepts and to develop an appreciation and awareness of math. The development of mathematical competence is seen as a spiraling curriculum, and the concepts are illustrated differently at every stage. The material is ordered in stages, but not delineated in terms of years of grade levels. The series has three types of books: Teachers' Guides, Weaving Guides, and Check-up Guides. The Teacher's Guides cover three topics -- computation and structure, shape and size, and graphs leading to algebra; and they contain direct suggestions, examples of seemingly un-mathematical situations and materials for use in instruction, examples of pupil's work, and suggestions for class discussions and out-of-school activities. The Weaving Guides give detailed instructions or information about a particular subject. The Check-up Guides provide individual check-ups for individual pupil's progress. In addition to these three types of books, there is a guide book (entitled "I Do and I Understand") devoted to helping a teacher deal with the problems which arise when such a personalized program is first introduced. (There also is a film devoted to this purpose which is available on free loan from the Petroleum Film Bureau, 4 Brook Street, Hanover Square, London, W. 1) The introductory book traces the Nuffield approach to math back to Piagetian theory and discusses such practical matters as class organization, materials, record-keeping, and so forth.

Another form of introduction to the Nuffield approach to math is

provided by a set of cassette audio tapes recorded by Mrs. Moira G. McKenzie, Headmistress, Bousfield Infant's School, London, England. These tapes are entitled: "I. From Teaching to Learning Math, II. Developing Underlying Structures, III. About Number and Ways of Recording, IV. The Teacher's Role in New Math." (These tapes may be purchased from the Listener Corporation, 6777 Hollywood Blvd., Hollywood, California 90028.)

Bessell, Harold, and Palomares, Uvaldo H. Methods in Human Development. San Diego: Human Development Training Institute, 1967.

There is an increasing awareness that perhaps public school programs should play a greater role in facilitating socio-emotional development. As yet, however, there are few systematically developed curricular approaches to help the teacher in this area. To meet this meed, Bessell and Palomares have developed what they call the "Human Development Program." This program focuses on activities designed to facilitate the teacher's efforts to "serve as a constructive catalyst" in the development of youngsters' awareness (of self and others), self-confidence (responsible competence), and social interaction. While the materials developed so far are designed for young children, the activities are readily adaptable for older youngsters and materials for teenagers are being prepared. The primary procedure underlying most of the activities is small group interaction between the teacher and 5-9 pupils. This resource should be viewed as a pioneering, experimental effort in the area of teacher-implemented curricular approaches to socio-emotional development. Viewed in these terms, it should prove to be a helpful starting point for the teacher who is

ready to expand her classroom program to focus more specifically and systematically on fostering socio-emotional growth and development.

Glasser, William. Schools Without Failure. New York: Harper & Row, 1969.

Like Bessell and Palomares, Glasser is concerned about socio-emotional development -- but he approaches it from a different perspective. In this resource, he applies his theories of Reality Therapy to school classroom programs. As is stated in the book's jacket, "Among the most important innovations he proposes is the use of the class, led by the teacher, as a counseling group which daily spends time developing the social responsibility necessary to solve behavioral and educational problems within the class, so that outside help is rarely needed. (Also covered in detail are new approaches to heterogeneous classes, testing, homework, and student classification.)" Glasser sees his approach as preventing school failure, e.g., an approach in which competency levels for basic skills are set and students then proceed more or less at their own pace.

(Glasser's concept of classroom meetings deserves special note. In such meetings, the teacher leads the whole class in nonjudgmental discussions about whatever is important and relevant to them. Through such meetings, it is expected that the students can learn how to be responsible, how to interact, how to deal with problems, and how to go about learning something. Glasser describes three types of classroom meetings: 1) social-problem-solving (discussions attempting to deal with the individual and group educational and social problems of the class and the school), 2) open-ended (discussions by children of

any exploratory question related to their lives, their school, etc.), and 3) educational-diagnostic (discussions related to what the class is studying; these can be used by teacher to evaluate teaching methods, weaknesses, etc.). He also lists the procedures required to initiate and maintain class meetings, and he discusses the experiences of teachers who have tried the meetings.

Borton, T., Reach, Touch, and Teach., New York: McGraw-Hill, 1970.

In Part 1 of this frankly autobiographical work, Borton describes the personal experiences which led him "to work on a curriculum aimed at reaching a student's fundamental concerns". Part 2 offers a discussion of "the problems and possibilities of teaching processes designed to meet student concerns". Curricular examples and models for lessons are provided. Appendix III provides a very helpful annotated listing of resources including training centers, introductory books, and materials dealing with personal growth and process education.

The addition of the resource references with focus primarily on language arts, mathematics, and socio-emotional growth and development provide the teacher with sources for learning a wide range of activities which will be of considerable aid in personalizing classroom instruction. At this point, many readers may be asking: What about science, social studies, drama, arts and crafts, music, dance, physical education, construction, cooking, sewing, and the multitude of other "subjects" which schools offer? It is beyond

the scope of this monograph (and the competence of this writer) to provide a complete set of appropriate references in each area which would be of interest. However, it should be noted that the teacher who has successfully personalized her program based on the models provided in the above references very likely will have activities which foster learning in many of these "subject" areas (e.g., science, music, art, crafts, cooking, sewing, and construction centers; drama and speech activities a la Moffett; and so forth). Equally as important, in the process of learning how to personalize the program to the point at which a more systematic approach to these other subjects is indicated, the teacher very likely will have learned how to find resources to help develop increasingly systematic approaches to such "subjects". As an additional aid in such a search, the following references are offered:

There is a series entitled "Practical Suggestion for Teaching" edited by Alice Miel, of which the Darrow and Van Allen book (cited above) is an excellent example. This series, published by Teachers College Press, deals with instructional ideas related to social studies, learning through movement, physical education, science, socio-emotional growth and development, and other areas as well.

There is also a series on individualization edited by Virgil Howes published by MacMillan Company. Two works in this

series contain selected readings dealing with programs and practices related to social studies, science and mathematics (as well as reading and language arts).

There are, of course, many excellent how-to-do-it books, some of which can be used directly by young pupils and some of which the teacher can use simply to extract activities and ideas.

A few other resources which have been found to be useful either by Cail Povey or Jeanne Fryer, or both, and which would not be discovered very readily are:

Berlin, Anne and Paul. The art of learning through movement. (Book and two records) (Write to 192 E. Green St., Claremont, Calif. 91711).

Hatcher, Carl. More than words...Movement activities for children. Parents-for Movement Publications, 1967. (1146 Steuben St., Pasadena, Calif. 91106).

Lowndes, Betty. Movement and drama in the primary school. London: Batsford Ltd., 1970

Pickering, John. Visual education in the primary school. London: Batsford Ltd., 1971. New York: Watson-Guptill Publications, (165 W. 46th St., New York, New York 10036). It should be noted that in this instance "visual education" means improving a pupil's observational abilities with a view to creative and artistic activity.

Pkuckrose, Henry. Creative themes. London: Evans Brothers, 1969.

Vivian, Charles. Science experiments and amusements for children. New York: Dover Publications, 1963.

Waters, Derek. Creative work with found materials. London: Mills & Boon, 1971

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Chapter 7

Step 2 -- Remediation: a conceptual view[1]

In chapters 4, 5, and 6, it is suggested that a number of learning problems could be corrected (and others prevented) by developing and adopting more effective broad-band teaching practices in the regular classroom, e.g., personalized classroom instructional procedures. For the rest of the problem pupils, additional modifications in classroom instructional procedures are needed. In discussing such modifications, the issue of whether or not there should be special classes and questions regarding which specialized practices to use are secondary to the problem of providing a teacher who has both the competence and time to interact with a particular pupil in very specific and active ways. In this connection, the fact that the remedial classroom teacher must be very specific and active in establishing an appropriate match between environmental circumstances and a particular pupil's assimilated schemata is seen as being the key to the differences between regular classroom ("developmental") instructional procedures and "remedial" classroom instructional procedures.

Developmental and Remedial Classroom Instruction

While the terms "developmental" instruction and "remedial" instruction convey the impression of substantive differences in teaching practices, it is emphasized that there is no evidence to support such an impression. In particular, there is no evidence that the teaching practices represented by these two labels are based on different principles. And, in

[1]Part of this chapter is taken from a previously published article by the author entitled: "Remedial classroom instruction revisited," (Journal of Special Education, 1972, 5, 311-322).

the absence of such evidence, it is suggested that it may be more helpful to differentiate such practices in terms of (a) their broad- and narrow-band characteristics and (b) the level and type of instruction for which they are designed (see Figure 5).

With specific reference to remedial classroom instruction, then, the first and foremost requirement is a competent teacher who has the time to provide the appropriate degree of specific and active, one-to-one instruction needed by pupils who manifest learning problems. Given such a teacher, the process of "remedial" teaching is still one of attempting to successfully establish an appropriate match between the environmental circumstances the pupil encounters and the schemata he has already assimilated. And, of course, the process is still essentially one of empirical trial and error. (Indeed, given the fact that such pupils have experienced school failure, the amount of trial and error involved in establishing an appropriate match is likely to be greater in remedial than in regular classroom instruction.) If the amount of trial and error is to be reduced and the success rate of remedial classroom instruction is to be increased, the teacher must have (1) specific knowledge of the pupil's assimilated schemata and (2) access and control over relevant environmental circumstances. To this end, he will need to have assessment data and will need to use narrow-band teaching practices, with a view not only to facilitating the learning of basic school subjects and prerequisites to school learning, but to helping the pupil overcome any negative behaviors or underlying process deficits that seem to be interfering with school learning and performance.

It is important to emphasize that some narrow-band teaching practices are nothing more than adapted broad-band procedures.

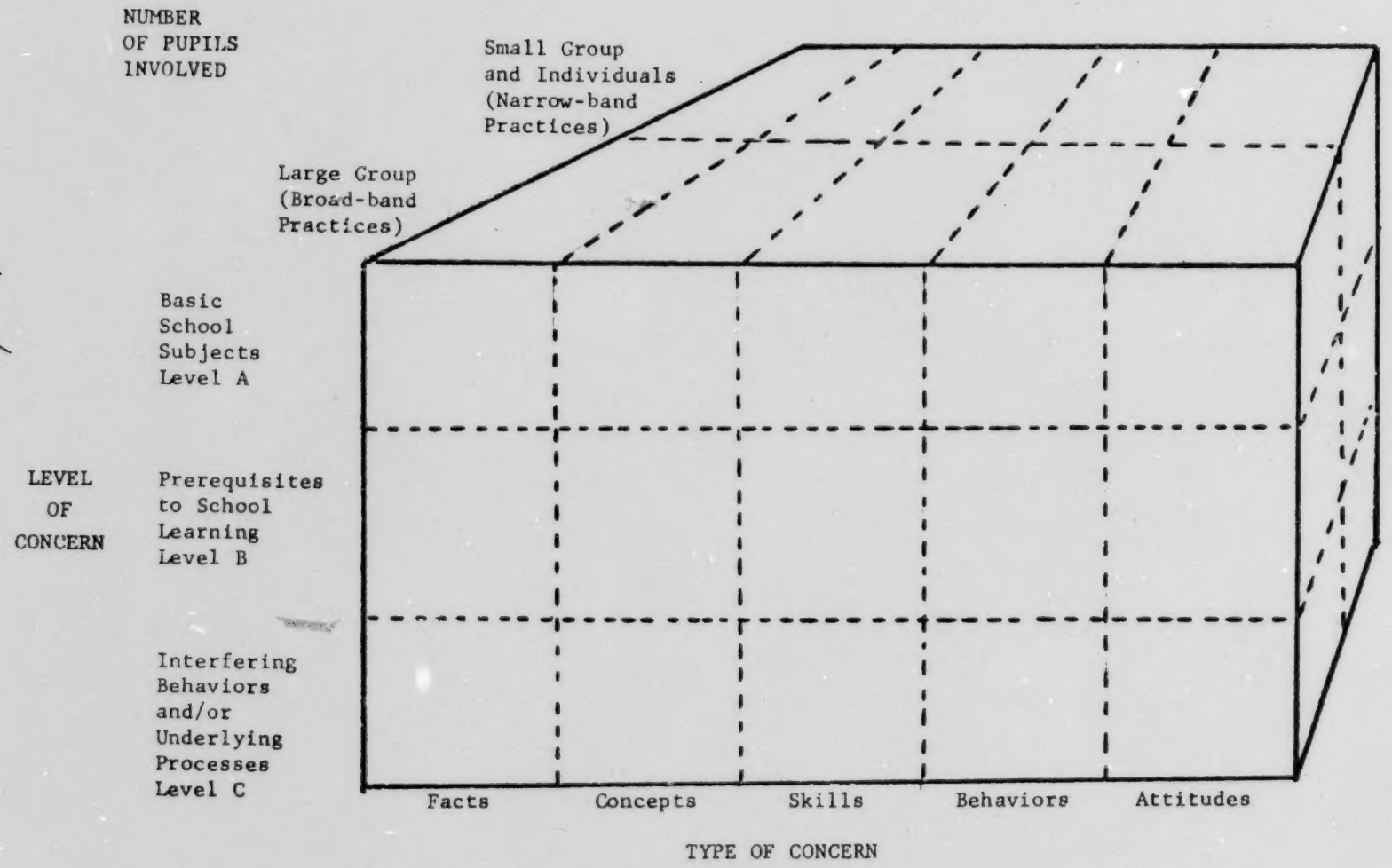

Figure 5. Factors which shape instructional practices

Others, of course, are special systems, techniques, and materials which have been developed especially for problem pupils and are based on specific theoretical formulations that emphasize such ideas as stimulus bombardment and modality isolation. The position taken here is that these specialized procedures can and should be reanalyzed and evaluated in terms of their motivating, attention inducing, performance inducing, and reinforcing properties. Such an analysis and evaluation would enable the "remedial" teacher to employ the same general criteria in selecting from among all the procedures with which he is familiar. That is, with reference to pursuing a particular instructional objective, the teacher first would survey such procedures (narrow- and broad-band, regardless of the level and type of instruction for which they had been designed); second, he would identify all the procedures which might be relevant for achieving the objectives; and then, he would choose the procedure(s) which he judges potentially to be most potent with regard to (a) attracting and focusing pupils on relevant stimuli, (b) initiating and maintaining appropriate pupil participation, (c) producing appropriate communication between teachers and pupils regarding results, and (d) strengthening preceding learning and behavior patterns for both pupils and teachers. It should be emphasized that the procedure(s) finally chosen may not have been developed originally for the purpose for which it is (they are) to be used. For example, a procedure developed for use in improving perceptual-motor functioning might be chosen because it is judged as a potentially effective procedure for use with a youngster who has no perceptual-motor problem, but needs to improve his ability to listen

to and follow directions.

In this way, the variety of alternative approaches available to the "remedial" teacher should be increased. And this should increase the likelihood that the teacher will be able to use, and the pupil will be able to find, learning activities that not only are appropriate with reference to the youngster's strengths, weaknesses, and limitations, but that are novel and exciting and have not become aversive -- activities that facilitate, simultaneously, an increase in approach and a decrease in avoidance tendencies on the part of the pupil (and the teacher). Thus, as has been suggested in previous articles (Feshbach and Adelman, 1971; Adelman, 1971b), the teacher should be able to capitalize upon and perhaps to institutionalize the Hawthorne effect.[2] That is, the teacher may be able to develop a program in which the positive attitudes and increased behavioral output that are seen as temporary and deceptive phenomena in experimental programs become a stable and positive aspect of the learning situation. What is being advocated is not complete novelty or novelty for its own sake, but a continuing emphasis on innovative practices in the classroom to help elicit and maintain teacher and pupil interest and effort. If the teacher is successful in deviating from the humdrum and routine and in producing the feeling that the pupils (and teacher) are participating in a program of personal interest, relevance, and importance to others, then the classroom should tend to maximize Hawthorne-type phenomena.

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[2] The term "Hawthorne effect" is discussed in footnote 3, Chapter 5.

In summary, then, whether the instructional focus is on pupils who learn satisfactorily or those who have occasional problems learning and performing in the regular classroom or those who manifest pervasive learning/behavior problems, it is this writer's view that classroom instruction involves the same processes, principles, and phenomena. The major differences in teaching problem and non-problem learners can be conceptualized (a) in terms of whether the practices are designed for use with large groups, small groups and individuals, or with any number of pupils, and (b) in terms of the level and type of instruction for which they are designed. Thus, for instance, with pupils who manifest serious and pervasive problems (e.g., behavioral, perceptual-motor, linguistic), the teacher needs to devote a great deal of effort to helping each pupil develop an adaptive schemata (response repertoire) which eventually will enable the youngster to appropriately participate in activities requiring the accomodation and assimilation of basic school subjects (or the immediate prerequisites for accomodating such subject matter). In this context, it should be emphasized that since many pupils' response capabilities are greater in one area than another, the teacher may need to use different practices with the same youngster. For example, the teacher may have to work individually (using narrow-band practices) to facilitate a pupil's acquisition of reading skills and at the same time may be able to include the youngster in a large group (where broad-band practices are used) when teaching arithmetic.

A Note on Assessment and Classroom Instruction

As stated in the preceding section, if the teacher is to reduce

the amount of trial and error and increase the success rate of classroom instructional efforts, he must have (1) knowledge of his pupils' assimilated schematas and (2) access and control over appropriate environmental circumstances. The implication is that the purpose of assessment is to provide information regarding how environmental circumstances should be varied to facilitate an appropriate match. The assessment procedures which provide such information can be categorized, like teaching practices, in terms of whether they are designed for large groups or for a small group or an individual, i.e., broad- and narrow-band practices.

Broad-band assessment -- In planning which broad-band teaching practices to use, the teacher needs to know about the general interests, needs, behavior patterns, and response capabilities of the pupils in his classroom. As has been suggested, fortunately we know something about such factors because of the work which has been done in describing developmental and behavioral norms. Assessment in such instances, then, essentially is a matter of determining whether or not most of the pupils in the class correspond to these norms. If the class varies significantly from the norm, the assessment data privides useful information for planning broad-band teaching practices which will allow for an "appropriate match" for the large majority of pupils.

(It seems likely that such broad-band assessment practices would be employed primarily by the teacher. However, in view of current deficiencies in teacher training, it cannot be assumed that the teacher has the competency to do the assessment or that after completing such an assessment he would have the competency to use the information to

plan an appropriate program. In this connection, assessment by someone outside the classroom may be necessary and, indeed, could be quite helpful not only in assessing pupils, but also in determining needs for teacher education, e.g., teachers needs with regard to broad-band assessment and teaching practices.)

Narrow-band assessment -- In planning which narrow-band teaching practices to use, the teacher needs to know about the specific interests, needs, behavior patterns, and response capabilities of a particular pupil. (Again, our knowledge of developmental and behavioral norms will be helpful.) Assessment in such instances is oriented to the individual and should be designed to provide specific guidance for varying environmental circumstances to facilitate an appropriate match for that individual.

Narrow-band assessment practices could be employed by either the teacher or someone from outside the classroom. A problem in either case is that of developing the necessary competency (a) to use and interpret narrow-band assessment practices and then (b) to translate the accumulated assessment data into specific implications regarding how to vary environmental circumstances in order to facilitate an appropriate match for the particular pupil who has been assessed.)[3]

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[3] In practice, there are few broad-band assessment procedures available for use by the teacher in the classroom. And, of those that are available, few seem to be appropriate. (The most obvious example of a broad-band assessment procedure is the standardized achievement test. In a personalized classroom program, achievement test information is viewed as unnecessary for program planning because of the emphasis on providing a wide variety of materials from which the pupil makes his own selection.) Among the most helpful procedures for gathering both general and specific information about

A Note on Diagnostic Teaching and Fractional Practices

Viewed in the general terms presented in the preceding section, formal and informal assessment have an important role to play in efforts designed to facilitate learning. It is critical, however, to delineate the nature of that role because of the frequency with which assessment procedures have been misused in shaping classroom practices for pupils with learning problems.

When confronted with a youngster who manifests learning and/or behavior problems, the question confronting the teacher is how much control she should exercise over (a) the physical classroom environment in which the youngster is allowed to function and (b) what the youngster is allowed to do. There are those who advocate such approaches as diagnostic teaching, remedial diagnosis, prescriptive teaching, clinical teaching, and so forth, all of which emphasize the

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pupils seem to be (a) questionnaires in which information about interests and needs is directly requested, (b) socio-grams which help to clarify who the power leaders and scapegoats are, and (c) written work (stories, poems, journals, records, etc.) which can provide some important data regarding interests, needs, behavior patterns, and response capabilities. The single most important procedure, of course, is teacher observation.

Most narrow-band assessment procedures are not intended to be used by the teacher in the classroom. (Included in this category are individually administered standardized tests of intelligence, and those which purport to measure perceptual-motor functioning, psycholinguistic abilities, and so forth. As is discussed later in this chapter, the validity of such tests as a basis for planning and implementing a program of classroom instruction is open to debate.) Such broad-band procedures as questionnaires and written work, of course, can be used as narrow-band procedures. In addition, informal inventories of basic skills can be helpful, especially to the beginning teacher. Such inventories provide the teacher with a ready reference to the types of skills she might reasonably expect a pupil to be developing and therefore, helps her in conferencing with the youngster and setting up skill groups.

specific training and remediation of areas of assessed weakness and impairment. Such an emphasis leads to practices which can result in a very high degree of control over what the youngster is allowed to experience in class (see Cruickshank, et al., 1961; Frostig and Horne, 1964; Lerner, 1971; Myers and Hammill, 1969; Peter, 1965). Critics of such teaching procedures have labeled them fractional practices. Such critics argue that: "The basic assumption underlying the development and utilization of fractional approaches is that human behavior may be successfully separated, as it were, into specific entities, units, of functions, these being essentially independent and capable of being individually evaluated and/or exercised" (Mann and Phillips, 1967).

The position taken here is that a high degree of specific teacher control over the classroom environment and what a pupil does in that environment is unnecessary, inappropriate, and counterproductive for Type I, most Type II, and some Type III problems. It is recognized, however, that for some problems it may be both necessary and appropriate to exercise a high degree of control in order to train specific skills. However, as Mann and Phillips (1967) suggest, it would not be appropriate to equate the successes of such training efforts "with the ancient and once discredited faculty psychology that appears to be renascent in many of the recent fractional approaches."

In concluding this chapter, it seems clear that assessment can and should provide both general and specific information regarding how environmental circumstances should be varied to facilitate learning. For the majority of pupils, this means assessing their interests, needs, behavior patterns, and response capabilities with a view to determining

such matters as the level of difficulty, the format, the thematic and stylistic characteristics of the various materials which are to be made available to the class. However, in those instances where pupils continue to manifest pervasive learning or behavior problems, or both, even after the program is personalized (step 1), the general lack of knowledge becomes painfully apparent and experimentation, both in assessing pupils and implementing programs, becomes the modus operandi. Such experimentation has led to the development of such procedures as the Marianne Frostig Developmental Test of Visual Perception (Frostig et al., 1964) and related educational materials (Frostig and Horne, 1964), the Illinois Test of Psycholinguistic Abilities (Kirk, McCarthy, and Kirk, 1968) and related programs (Hartman, 1966), and undoubtedly will result in a variety of other tests and test-related remedial practices. Obviously, these experimental products must be used cautiously and under controlled circumstances to avoid harming the pupils exposed to such procedures and to determine the validity of the assessment and remedial practices. Until there is substantial evidence supporting the efficacy of a procedure, the advisability of its general usage remains open to serious debate. Indeed, in a field inundated with fads, a healthy skepticism should be the order of the day.

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Lerner, J. W. Children with Learning Disabilities. Boston: Houghton Mifflin Co., 1971.

Mann, L., and Phillips, W. A. Fractional practices in special education: a critique. Exceptional Children, 1967, 33, 311-317.

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Chapter 8

"Remedial" Practices: annotated references

This chapter presents a selected group of annotated references to resources which describe practices that have been used with pupils who manifest learning and behavior problems. While the references are grouped with regard to the level of instructional concern (see figure 5, chapter 7) for which the practices described generally are used, it is re-emphasized that a particular procedure may prove to be useful for purposes other than those for which it was developed. This, of course, is not only true of the references listed below, but of those listed at the end of chapter 6. Thus, it is recommended that the teacher evaluate each activity described in any resource with regard to its possible application (in its described form or with some modifications) at levels of instructional concern other than that for which it appears to be designed.

No attempt is made here to be exhaustive. Indeed, the reverse is true. The intention is to provide a very delimited list which contains resources which are either representative of a type or distinctive in some way.[1]

Basic School Subjects (Level A)

(It is worth noting again that almost all the references included at the end of chapter 6 have activities which can be useful here.)

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[1] Specialized "packaged" programs, e.g., the various basal text series, Sullivan programmed readers, SRA labs, Distar, and so forth, have not been included in chapter 6 and will not be included here.

Otto, Wayne and McMenemy, Richard A. Corrective and Remedial Teaching. Boston: Houghton Mifflin Co., 1966.

There are many resources which have focused on remedial practices. This book by Otto and McMenemy was chosen for inclusion here because it is representative of this type of book and because it takes a somewhat broader perspective than some of the others with its emphasis on both corrective and remedial teaching. In writing the book, the authors intention was to provide a resource for "teachers who will deal with learning problems in the several basic skill areas in a typical school setting." The book encompasses a resumé of techniques and materials for reading, math, spelling, and handwriting. (In using this resource, the teacher should be certain to note that many of the practices can be adapted for use in a readiness [Level B] instruction.)

Fader, Daniel N. and McNeil, Elton B. Hooked on Books: Program and Proof. Berkley: Berkley Publishing Corporation, 1968.

It's fitting that Fader and McNeil's book is a paperback since paperbacks play such a key role in the program of learning they describe. The activities described in part one of this resource were developed with youngsters in penal institutions and in disadvantaged area schools; in both settings there were many youngsters who were viewed by their teachers as unteachable. In sum, all the activities described emphasize that writing is for saying something and reading is for enjoyment. (The assumption underlying this emphasis is that "the chief problem in teaching reading and writing is not intellect but motivation.") Materials and methods for reading and writing are described, model study guides for use with paperbound books are

included, as is a list of 1,000 paperback books which youngsters have been found to enjoy. Both the general approach to teaching these youngsters and the specific materials and activities involved are well worth reading about and the investment of time needed to read this inexpensive resource is minimal.

Harris, Albert J. How to Increase Reading Ability. (5th edition) New York: David McKay Co., Inc., 1970.

There are so many books which deal with the area of reading that the choice of any one for annotation here is almost ludicrous. Harris' book was chosen because he focuses on what he calls "developmental" and "remedial" methods. Reading is dealt with broadly; there is an effort to present a balance with regard to differing points of view, and there is a strong emphasis on practical aid to the teacher. Included are chapters on developing readiness, beginning reading, meeting individual needs, assessment, skill building, overcoming pupil difficulties, and fostering interest. One of the appendices is devoted to a (graded) list of books for (remedial) reading. (Some of the other texts on reading include such lists and also have appendices devoted to listing a variety of other reading resources, e.g., games, workbooks, and devices.)

Cushenbery, D. C. Remedial Reading in the Secondary School. West Nyack, New York: Parker Publishing Co., Inc., 1972.

Too few books address themselves to the reading needs of secondary students. Therefore, the reader will be interested in Cushenbery's discussion of: (1) the need and importance of a secondary reading program, (2) factors related to ineffective reading and basic

principles for establishing a reading program for retarded readers, (3) how to develop needed vocabulary and word attack skills, comprehension and study skills, and content area competence, (4) how to evaluate reading and performance, (5) how to develop and extend literary interests, and so forth. The Appendices provide some lists of instructional material, audio-visual devices and media, periodicals for youth, book clubs for youth, and reading for the teacher.

Fernald, Grace. Remedial Techniques in Basic School Subjects. New York: McGraw-Hill, 1943.

The pioneering work of Grace Fernald is described in this "classic". Despite the fact that this book was published in 1943, the selective reader will find many useful techniques presented in Part I, "Methods of Teaching Reading" (which includes also a focus on writing), Part II, "Spelling", and Part III, "Mathematics". Fernald developed these techniques (and they still are being used) in work with a wide range of learning and behavior problems. Her approaches are a good example of step 2 teaching at Level A. (In addition, if the reader applies the conceptual approach to remediation presented in chapter 7, it will be clear that some of the general techniques can be adapted for use at Levels B and C.)

Gillingham, Anna and Stillman, Bessie W. Remedial Training for Children with Specific Disability in Reading, Spelling, and Penmanship. Published by the authors, New York, 1946.

Like Fernald, Gillingham and Stillman reported their work with learning problems in this book published in the mid-forties. Part 2

of this resource is devoted to describing classroom activities in the areas of reading, written expression, spelling, and penmanship. The approach to reading and spelling is phonetic, and as such, provides a contrast to many of the procedures which are to be found in Fernald's book. If a youngster doesn't "take" to the Gillingham and Stillman approach, he may take to Fernald's approach.

Prerequisites to School Learning (Level B)

The resources which have been listed above all have activities which also can be used (as is or with some modification) at this level of instruction. The teacher who has need for activities at this level will find many ideas in resources which focus on "reading readiness". Three such resources are listed below.

Siegal, E. Special Education in the Regular Classroom. New York: John Day Co., 1969.

Since there are not a great many resources available which discuss techniques for dealing with problems at this level, the reader may find Chapter 3 in this book helpful. The author briefly discusses techniques for solving "nine basic problems". The nine problems are: poor self concept; anxiety; difficulty in paying attention, organizing, copying written material; poor coordination; difficulty in abstract thinking; behavioral problems; and social immaturity. It should be reemphasized that this is a brief (60 page) presentation; its main contribution is as a summary of some basic techniques.

Monroe, Marion and Rogers, Bernice. Foundations for Reading. Chicago: Scott, Foresman and Co., 1964.

Monroe and Rogers focus on the pre-reading period with suggestions for specific activities beginning from the pupil's enrollment in school until he is ready for reading in books. The book begins with brief discussions of the relationship between spoken and written language and of the assessment of a pupil's spoken language. The following chapters are devoted to activities related to improving auditory and visual skills (e.g., listening, attending, eye control) and interpretive skills.

Slingerland, Beth H. Training in Some Prerequisites for Beginning Reading. Cambridge, Mass.: Educators Publishing Service, 1967.

This is a distinctive resource describing activities which are appropriate for promoting readiness not just for reading, but for all learning in the classroom. While the activities are designed for young children, many can be adapted with ease for older pupils who need help at Levels B and C. Activities are described for speech practice, auditory recall, visual recall, kinesthetic recall, and orientation. (They can be used to improve listening, attending, following directions, and so forth.) The materials involved in these activities are all readily available and inexpensive (e.g., pictures from magazines or other similar sources, small toys and objects from dime stores, objects from around the classroom.) Each activity specifies materials needed and a likely inexpensive source, and outlines the objective and procedures.

Underlying Process Deficits/Interfering Behaviors (Level C)

There are a wide variety of techniques which have been advocated

for use at Level C. Names like Ayllon, Barsch, Bereiter, Bettelheim, Cruickshank, Delacato, Engelmann, Fernald, Fitzhugh, Frostig, Getman, Gillingham, Haring, Hewett, Kephart, Kirk, Lehtinen, Montessori, Myklebust, Orton, Stillman -- all have been credited with influencing the development of experimental approaches which can be used with pupils who manifest severe learning and/or behavioral difficulties. Summaries of most (but not all) of the important approaches are to be found in basic texts. The teacher will find such texts helpful as a general guide to primary references in which the teacher thinks she will be interested. Three such secondary resources are:

Lerner, Janet W. Children with Learning Disabilities. Boston: Houghton Mifflin Co., 1971.

In part III of this book, Lerner reviews theories and some of the teaching strategies for the development of sensory-motor and perceptual-motor functioning, perception and memory, language, cognitive skills, and social skills. (The teaching strategies may be used, often for a variety of purposes, even if one does not subscribe to the theory presented.)

Myers, Patricia I. and Hammill, Donald D. Methods for Learning Disorders. New York: John Wiley & Sons, Inc., 1969.

This text provides a more extensive review of methods than Lerner's book. The authors offer chapters on "perceptual-motor systems" (Kephart, Friedus, Getman, Barsch), "Multisensory systems" (Lehtinen, Cruickshank, Fernald), "Language Development systems" (Myklebust, Barry, McGinnis), "Phonics systems" (Orton, Gillingham, Spalding), "a structured system" (Fitzgerald), "test-related systems"

(Frostig Program, Preschool Diagnostic Language Program) and "a neurological organization system" (Delacato).

From the summary reviews in these two (or similar) texts, the teacher can judge which experimental approaches would be helpful for Level C instruction. It also will be clear that some of the approaches might be appropriate (as is or with some modifications) for Levels A and B instruction.

Bartel, Nettie R. and Hammill, Donald D. Teaching Children with Learning Problems: A Handbook for Teachers, 1971. This resource may be purchased from the authors by writing to them at Temple University in Philadelphia, Penn.

In most ways, this resource is comparable to the Myers and Hammill text; however, it does review some approaches not mentioned in the Myers and Hammill book.

The Bartel and Hammill handbook is "a compilation of currently used remedial teaching and assessment techniques ... assembled in response to urgent requests of teachers who have pupils evidencing learning difficulties." It includes sections on helping problem learners overcome difficulties in (1) reading (encompassed are reviews of the approaches of Fernald, Gillingham, Spalding, the basal-experience approach, language experiences, the Stern Structural Reading series, the Peabody Rebus Reading Program, the Initial Teaching Alphabet, color coding, the Phonovisual Method, the Sullivan Reading Program, the Individualized Reading Instruction Program), (2) spelling, (3) writing, (4) language processes (encompassed are reviews of the approaches of Barry, Myklebust, McGinnis, Sesame Street, Bereiter and Engelmann, Fitzgerald and Pugh, the Peabody Language

Development Kit, the MWM program), (5) arithmetic (encompassed are reviews of the approaches of Catherine Stern and the Cuisenaire-Gettegno Materials), (6) perceptual-motor processes (the focus is on the work of Kephart, Getman, Barsch, Frostig, Friedus, Doman and Delacato). There is also an appendix devoted to describing educational materials and resources; these materials and resources are categorized under the six major areas of psychoeducational development described by Robert Valett (see reference later in this chapter).

Despite the fact that they are mentioned in the three texts referenced above, the following two resources are singled out for description here because they reflect the types of experimentation which have been attempted.

Hewett, Frank M. The Emotionally Disturbed Child in the Classroom. Boston: Allyn and Bacon, Inc., 1968.

This is one of the important approaches mentioned only in passing by Lerner and Myers and Hammill. The reason, of course, for this neglect is because the title states that the focus is on "emotionally disturbed" children and the Lerner and Myers and Hammill books focus on children with learning disorders/disabilities. As has been emphasized in the preceding chapters, it is viewed as a serious mistake to assume that practices developed with one group of pupils in mind will not be useful with some other group. (Indeed, they may not be, but such a conclusion should be arrived at after careful analysis and not based on categorical assumptions.)

The experimental practices suggested by Hewett have been developed within a conceptual framework he calls "the behavior modification

strategy;" however, it may be emphasized (as is the case with other resources described in this chapter) that the use of many of the practices do not require adherence to such a conceptual view. The teacher of emotionally disturbed pupils (pupils such as Mark) certainly will find this resource extremely helpful in here efforts to teach at Level C. And, any teacher who needs ideas for Level B instruction (e.g., teaching pupils to attend, follow directions, order and sequence) will find useful ideas in section 2 of this book.

Cruickshank, William M., Bentzen, Frances A., Ratzeburg, Frederick H., and Tannhauser, Mirian T. A Teaching Method for Brain-Injured and Hyperactive Children. Syracuse: Syracuse University Press, 1961.

This resource is a monograph based on a demonstration-pilot study designed to investigate the value and effect of a nonstimulating classroom environment, specially prepared teaching materials, and highly structured teaching methods upon the learning problems and school adjustment of hyperactive children with and without clinically diagnosed brain injury. Part V is devoted to a presentation of the experimental teaching method and discusses a variety of specific activities related to teaching eye-hand coordination, sensory discrimination, motor training, writing, arithmetic, reading, and art. The teacher who is attempting to provide instruction for any youngster who manifests chronic and severe learning problems will want to evaluate the ideas and activities which are presented with regard to their potential usefulness in her own experimental efforts.

(This resource provides an excellent example of a program whose activities may be very useful for some youngsters and, therefore,

should be considered by the teacher even though she might not accept the basic premise of the program. For the record, this program is based on the assumption that there is "psycho-pathology inherent in the child" and that the teacher should "teach directly to the disability." [Based on Strauss and Lehtinen's work, brain-injured children are described as having the characteristics of (1) distractibility, (2) motor disinhibition, (3) dissociation, (4) disturbance of figure-background relationship, (5) perseveration, and (6) absence of a well-developed self-concept and body-image concept.] The four elements which are cited as resulting in a good teaching environment are (1) reduced environmental stimuli, (2) reduced space, (3) structured school program and life plan, and (4) increase in the stimulus value of the teaching materials used. The major consideration in terms of structure is seen as keeping all activities within the limits of tolerance or within the level of success of the children. [It is believed that the brain-damaged child is too confused by many stimuli and the need to make choices; thus, stimuli are greatly reduced and the child is given little or no choice in his activities.])

Vallet, Robert E. The Remediation of Learning Disabilities: a handbook of psychoeducational resource programs. Palo Alto, Calif.: Fearon Publishers, 1967.

This is a distinctive resource both in its format and scope. As the title indicates, this is a resource handbook with the contents inserted into a three-ring notebook so that the activities can be supplemented (by the teacher or the publisher). As the author indicates in the preface, "a total of fifty-three learning abilities have been

operationally defined, illustrated, and given an educational rationale for remedial programming. Then each ability has been considered as a developmental task, and a number of beginning, middle, and advanced level program ideas have been suggested." The program also suggests a system for assessment (before and after instruction). The 53 abilities (listed under their respective categories) are:

Gross Motor Development: 1) rolling, 2) sitting, 3) crawling, 4) walking, 5) running, 6) throwing, 7) jumping, 8) skipping, 9) dancing, 10) self-identification, 11) body-localization, 12) body abstraction, 13) muscular strength, 14) general physical health;

Sensory-Motor Integration: 15) balance and rhythm, 16) body-spatial organization, 17) reaction-speed dexterity, 18) tactile discrimination, 19) directionality, 20) laterality, 21) time orientation;

Perceptual-Motor Skills: 22) auditory acuity, 23) auditory decoding, 24) auditory-vocal association, 25) auditory memory, 26) auditory sequencing, 27) visual acuity, 28) visual coordination and pursuit, 29) visual-form discrimination, 30) visual figure-ground differentiation, 31) visual memory, 32) visual-motor memory, 33) visual-motor fine muscle coordination, 34) visual-motor spatial-form manipulation, 35) visual-motor speed of learning, 36) visual-motor integration;

Language Development: 37) vocabulary, 38) fluency and encoding, 39) articulation, 40) word attack skills, 41) reading comprehension, 42) writing, 43) spelling;

Conceptual Skills: 44) number concepts, 45) arithmetic processes, 46) arithmetic reasoning, 47) general information, 48) classification, 49) comprehension;

Social Skills: 50) social acceptance, 51) anticipation response, 52) value judgments, 53) social maturity.

As has been discussed in chapter 7, caution should be taken not to initiate prematurely a program of specific skill training. However, when an individual pupil has a specific need, a resource like this may prove of great value to the teacher. In addition, as also has been suggested, many of the activities may prove useful for purposes other than those the author has indicated. It should be noted that Vallett points out that the fifty-three "Resource Programs are only beginning suggestions that must be modified to meet the individual needs of each pupil. They are intended to be merely a rough guide for experimental use in the programming of pupils with learning disabilities."

All Levels

Academic Therapy, a quarterly: Published by Academic Therapy Publications. John I. Arena, Editor. (1539 Fourth St., San Rafael, California: 94901)

Academic Therapy is a journal published quarterly and "dedicated to the interdisciplinary study and remediation of learning disabilities." Some issues are devoted entirely or in large part to describing techniques and materials which teachers may find helpful at all three levels of instructional concern. The following "Special Issues" are examples:

"Building Number Skills in Learning Disabled Children," Vol. VI, Number 1, Fall, 1970.

"Handwriting: Dysfunction and Remedial Approaches," Vol. IV, Number 1, Fall, 1968.

"Spelling: Diagnosis and Remediation," Vol. III, Number 1, Fall, 1967.

Chapter 9

Towards Accountability[1]

Until recently, the question of how to evaluate, systematically and comprehensively, the nature and worth of programs of systematic school instruction generally has been ignored. Currently, it is one of the most discussed and least understood concerns in the field of education. This chapter encompasses an attempt to present a brief conceptual framework for understanding what is meant by the term evaluation and what is involved in evaluating educational programs.

Evaluation and Research Differentiated

For purposes of the following discussion, program evaluation is defined as that process by which attempts are made to understand total programs in order to describe, predict, explain, and make decisions, e.g., determining the over-all impact and value of a training program. (By way of contrast, in the context of program evaluation, assessment is viewed as that process by which specific components of a program are described and usually are judged. A program evaluation, then can be viewed as a synthesis of component

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[1]This chapter is adapted from material presented elsewhere, e.g., see H. S. Adelman, Teacher education and youngsters with learning problems, Part I: Basic issues and problems confronting teacher education programs. Journal of Learning Disabilities, 1972, 5, 467-483.

assessments, but when it comes to judging the total package of data, the whole should be viewed as being more than the sum of the various component parts.) Stake and Denny (1969) have expressed the goal of evaluation as follows: "Evaluation is not a search for cause and effect, and inventory of present status, or a prediction of future success. It is something of all of these but only as they contribute to understanding substance, function, and worth" (p. 370).

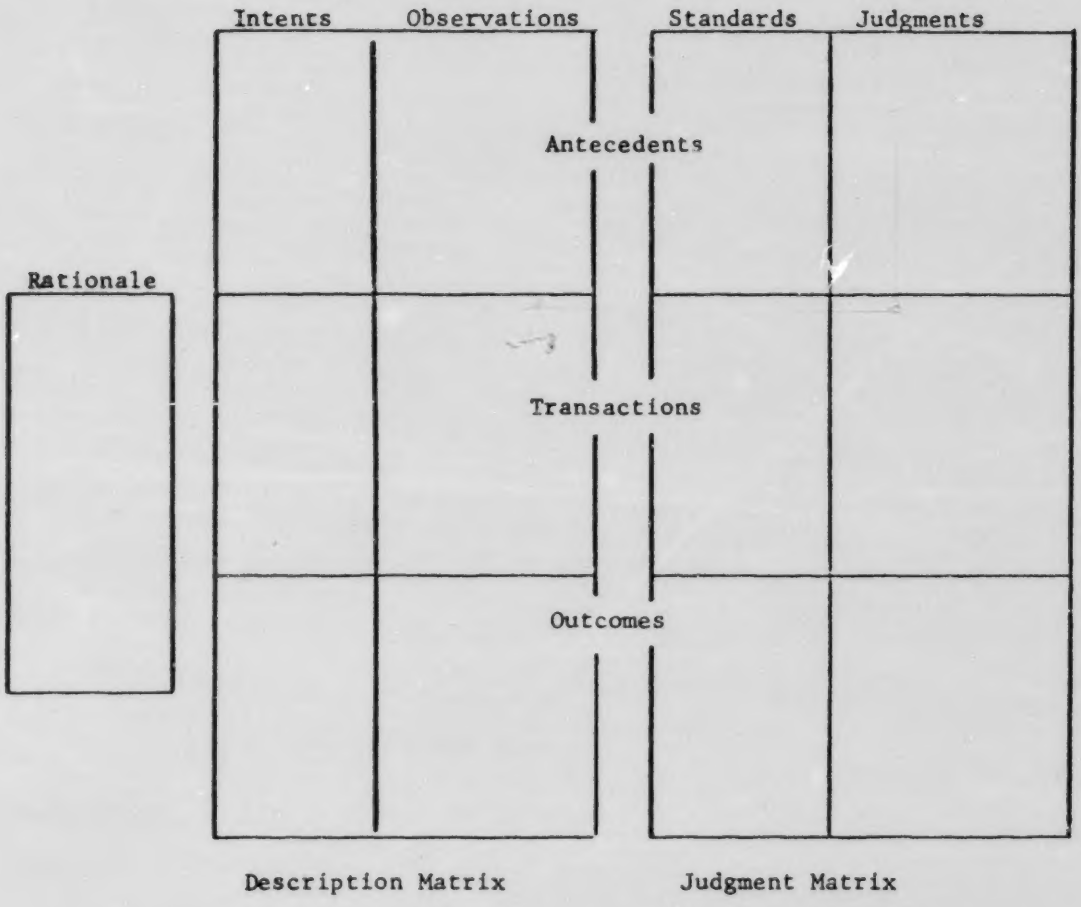
Most writers in this area have made a distinction between evaluation and research as related to educational programs, and the distinction has been conceptualized in a number of ways. In its most basic form, evaluation may be viewed as any process by which information is gathered and judgments are made about a specific program. Often such information is non-generalizable because of the lack of appropriate standards by which appropriate relative and/or absolute comparisons might be made. In contrast, educational research which focuses on program evaluation may be viewed as a process by which information is systematically gathered using carefully controlled procedures and appropriate comparisons, thereby producing information which may have widespread implications. McIntyre, Meierhenry, Hoffman, Baldwin, and Fredericks (1969) distinguish between evaluation and research as related to education programs by conceptualizing the two as being on a continuum with informal evaluations at one end and highly controlled comprehensive research efforts at the other end.

Perhaps the greatest value of the distinction between program evaluation and research is not so much that it clarifies the conceptual difference between the two but that it clarifies the limitations of many current evaluative efforts. Ideally, all programs should be comprehensively evaluated using a research design which allows for absolute and/or relative comparisons with appropriate standards. Such formal and systematic evaluations would provide both useful feedback for a specific program and generalizable information which would be of value to others, e.g., the data collected could make a substantial contribution to efforts to deal with basic issues confronting the field of education.

Key Factors in Evaluating Educational Programs

In conceptualizing the various facets which should be considered in attempts to evaluate current programs in education it is helpful to begin with the general conceptual framework for evaluating educational programs which has been formulated by Robert Stake (1967).[2] In brief, Stake emphasizes that "the two basic acts of evaluation" are description and judgment, and both are needed if programs are to be understood (see Figure 6). In addition, his conceptualization clarifies that, if a program is to be fully described and judged, there must be data (a) for evaluating the functional contingencies between antecedent conditions, transactions, and outcomes, (b) for evaluating

[2]Additional resources with which the concerned reader may want to become familiar are presented in the resource guide on evaluational planning (Duchon, Hull, and Carpenter, 1973) which is designed as a companion work to this monograph.



A layout of statements and data to be collected by the evaluator of an educational program.

Figure 6. Stake's Graphic Representation of his Conceptual Framework for Program Evaluation*

*Reprinted by permission of publisher.

the congruence between what is intended and what occurs, and (c) for making absolute comparisons (based on standards of excellence) and/or relative comparisons. Obviously, such a matrix of data would provide much of the information needed for describing, demonstrating the effectiveness of, and improving a program's basic propositions and goals, content and process, as well as for making general decisions about such programs.

A number of factors should be considered in conceptualizing the nature and scope of program evaluation.[3] First, in evaluating any educational program, it is important to determine not only the congruence between what is intended and what occurs, but also to investigate possible major side effects. For example, most programs do not have well delineated objectives in the affective domain, and therefore, data often is not collected regarding the program's impact in this area. This is unfortunate since two programs which produce professionals of equal ability with reference to stated performance criteria may produce individuals with very different attitudes regarding the field of education.

Another critical variable to be considered is the time at which the evaluation is carried out. It is evident that all formal educational programs are lengthy and that educational programming

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[3] It may be noted that Stake's framework has direct application in efforts to evaluate programs which prepare education professionals. Such evaluation, however, encompasses the direct application of the framework not only to such a program, but also to specific district and school programs in which the preparation program's staff, participants, and graduates are involved. For example, in addition to investigating the impact on the program's candidates and graduates (such as their ability to plan and implement a special lesson), data should be gathered on the pupils with whom they work (such as whether the pupils learn the skills included in the lesson) and on the effect the program's candidates and graduates have on the districts and schools in which they are employed (such as whether they stimulate changes in basic policies regarding methods and materials).

is most appropriately patterned and sequenced with reference to long range goals rather than immediate instructional objectives. Indeed, the most relevant criterion for evaluating a program's success is the long range impact, and thus it should be recognized that the use of immediate objectives as criteria may be misleading. For example, the positive or negative impact of something learned today may only be reflected at a later time; furthermore, the fact that something is not learned at a particular moment is not tantamount to saying that it should have been learned at that moment, for it well may be that it will be more easily mastered at a subsequent time. Thus, in view of such temporal factors, it is evident that the differences between two groups of individuals from different programs may not be apparent at the conclusion of their respective programs but may be very evident two years later.

Further complications arise from the impact of individual difference variables. For example, a procedure may prove to be more effective for an individual with a certain pattern of personality characteristics than for a person with a different pattern.

And, of course, it is necessary to consider the amount of economic support (time, staff, space, etc.) required to bring about particular effects. For example, the accomplishments of a new procedure must be evaluated with reference to cost factors in order to determine its feasibility for large scale implementation.

Finally, since all educational programs need to be improved, a comprehensive evaluation of a program requires an investigation of the degree to which evaluative feedback is used systematically to improve various aspects of the program, e.g., content and process.

Critical Problems Related to Evaluating Programs

As the preceding discussion suggests, comprehensive program evaluation is complex. In addition to this complexity, there are some serious problems which must be overcome before the comprehensive evaluation of programs in education can be accomplished.

Besides the very real practical problems related to attitudes toward and the financial costs of comprehensive program evaluation, there are a number of problems related to what should be measured and how to measure it. One of these critical problems stems from the failure of educators to specify the knowledge, skills, and attitudes which are to be developed by the program. Without a clear statement of instructional objectives and the related observables they encompass, those responsible for evaluating the program are seriously handicapped in their efforts (a) to establish appropriate priorities regarding what is to be investigated and what the performance indicators are to be, (b) to evaluate (sample) the congruence between what is intended and what occurs, (c) to investigate possible side effects, and so forth.

Another critical problem is that appropriate measures and procedures for evaluating some very important aspects of programs

have not been developed. And the reason for this state of affairs is not simply the absence of the knowledge and skill needed to develop them. (It seems reasonable to suggest that many program evaluators and developers of measures and procedures used in evaluative investigations tend to limit their efforts to those areas which our society values and rewards.) Whatever the reason, however, the lack of availability of appropriate measures and procedures has made it impossible, to date, to even contemplate fully evaluating an educational program.

The resolution of the above problems will require considerable time and resources, and in the meantime, program evaluation will suffer from a variety of inadequacies. This fact gives rise to another problem, i.e., a reaction against program evaluation. There are many individuals and groups who would prefer to see no evaluation rather than take a chance that a program will be evaluated in an inadequate (unreliable and/or invalid) fashion. These critics point to those instances when evaluative procedures and data have been misused and abused. For example, some special educators point to the tendency (e.g., on the part of legislators) to have special education programs evaluated <u>primarily</u> in terms of immediate achievement benefits to children and cost accounting procedures. (There has been a trend to judge a program's benefits in terms of immediately measureable improvement in the "3R's"; moreover, it has been suggested that the amount of improvement should be judged with reference to

whether it warrants the fiscal expenditure per teacher and per pupil. On the surface, such criteria may appear to be reasonable. However, in light of our current limited knowledge regarding effective strategies for educating many groups of children, e.g., exceptional children, this level of evaluation is probably premature and is certainly not comprehensive enough.) Clearly, the use of such inappropriate evaluative criteria is lamentable. Equally lamentable, however, is the tendency to suggest that such misuses of the evaluative process justify the continuing absence of formal evaluation which characterizes so many education programs. The misuses and abuses of the evaluative process do not invalidate the importance and usefulness of evaluation. Indeed, it should be emphasized that much of the criticism which has been directed at the inadequacy of current procedures, "and the unfairness of decisions based on them, represents a localizing in the tool of the blame for the lack of clarity which characterizes the thinking of citizens of this democratic society, for it is the citizenry who determine the values and policies which direct the use of society's technical methods" (Adelman, Zimmerman, and Sperber, 1969, p. 130). Thus, the reaction against program evaluation is viewed as inappropriate; this, of course, does not make the problem any less real.

Obviously other examples could be offered of problems which confront program evaluators. However, it is felt that the problems

which have been discussed are, currently, the major deterrents to the comprehensive evaluation of training programs in education.

Some Thoughts on Evaluating Special Education Programs.

Within the limitations set by such problems as those which have been described above, any program should attempt to evaluate as wide a range of impact as possible using procedures and standards which allow for objective and generalizable conclusions. For example, a comprehensive evaluation might encompass an investigation of the program's impact on (1) the students who are served directly and indirectly, (2) the community, and (3) the field in general. The primary emphasis in such an evaluation should be on describing and judging the congruence between stated instructional objectives and what is accomplished, but there also should be an investigation of possible major (positive and negative) side effects.

To be more specific about the nature and scope of such evaluative efforts, and investigation of the program's impact might focus on:

(1) the students with particular reference to (a) the remediation of underlying process deficits, interfering behaviors, or both, e.g., perceptual deficits, extreme withdrawal and passivity, (b) the acquisition of needed pre-requisites, e.g., attending, listening, (c) achievement in basic school subjects, e.g., reading, language, mathematics, and (d) relevant other behaviors and attitudes, e.g.,

self-direction, self-evaluation, inter-student cooperation interests, values, feelings toward school;

(2) the community with particular reference to the number of persons, groups, agencies, associations, etc., who are served directly or indirectly as a result of such services as counseling and resource referral, the provision of space and manpower for non-curricular activity, and so forth;

(3) the field with particular reference to (a) the number of professionals, para-professionals, and recruits who are influenced directly and indirectly, (b) effects on specific school districts which probably would not have occurred if the program did not exist, e.g., changes in policies and practices related to classroom methods and materials, staffing, in-service training, and so forth which were facilitated by the program's staff, students, and/or graduates, (c) effects on specific institutions of higher education, e.g., changes in policies and practices related to preservice training, and (d) effects on educational thought in general, e.g., changes in conceptualization regarding the purposes and processes of formal education.

Some of the key steps in evaluating (and studying) educational programs are seen as follows:

1. In studying or evaluating educational programs, it is important to start with a detailed understanding of the problem, hypotheses, evaluation need, etc..

2. With a clear understanding of the "problem" being addressed, it generally is possible to translate such a problem into a set of major questions which should be answered, e.g., How effective are teachers in a particular school with reference to teaching reading? Do kindergartners with perceptual-motor problems have more difficulty learning to read than those without such problems?

3. As a first step in answering questions which have been formulated, it is necessary to specify the relevant descriptive data (intended and unanticipated outcome, transactional, and antecedent variables) which have a bearing on the questions (e.g., see Figure 7 and Appendix I for a description of some key variables).

4. After specifying the data, it is necessary to specify the procedures which can be used to gather such data. As a brief summary, it may be noted that pertinent data can be gathered by employing rating scales (Likert and Guttman scales), checklists, questionnaires, and surveys, objective and projective tests, essays, semantic differential, Q sorts, anecdotal records, systematic analyses of products and performance, systematic records of specific accomplishments, directly solicited evaluations, measures of elements of such constructs as anxiety, locus of control, independence and self-control, expectations and aspirations, and so forth. (Obviously, whenever possible, standardized procedures should be used.)

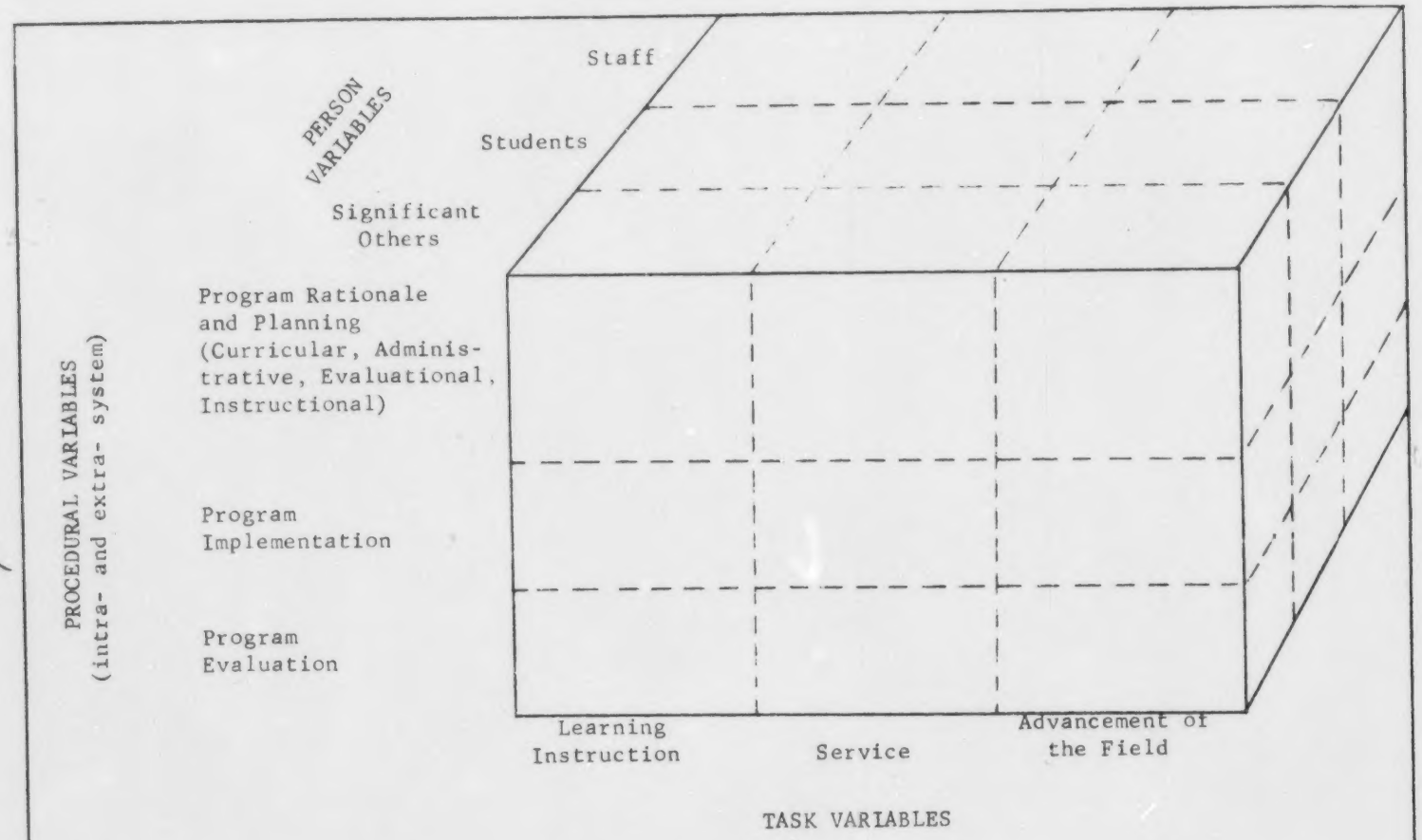

Figure 7. Some Key Variables to be Considered in Analyzing Educational Programs

With reference to conceptualizing the potential measures which might be used, Popham (1971) has suggested the consideration of two dimensions: "(1) the measurement stimulus situation and (2) the type of ... response required." As he states, a response can be observed and measured under either natural (e.g., classroom social interactions) or manipulated (e.g., test situations) conditions, and such responses can be either a product (e.g., an essay) or direct behavior (e.g., reading aloud). With reference to the two types of responses, it should be emphasized that (a) products will be the result of selecting from alternatives (e.g., multiple choice questions) and/or the construction of a response (e.g., an essay); (b) behavior can be recorded (visually and/or auditorily) for later analysis; (c) the focus may range from "molar" to "molecular" responses; and (d) the response may or may not be made anonymously. In addition, it may be noted that many measures have a "reactive" effect, and, therefore, unobtrusive measures should always be considered and given high priority.[4]

The types of people who can provide the desired data range from individuals involved in a particular program to representatives of a variety of external interest groups, institutions, and agencies. The most likely sources are a program's students and instructional, administrative, and support staff, qualified individuals who are not affiliated with the program (who will be impartial), members of policy-making and other interest groups, relatives of students, and subsequent employers and colleagues.

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[4] The two most critical considerations with reference to the measures selected, of course, are the degree to which they can be used to produce reliable data (e.g., over time, over situations, between raters) and the degree to which such data has validity (e.g., content validity, predictive validity).

5. In addition to designating the procedures to be used in gathering the desired data, it also is necessary to specify the design to be used. In this connection, see Campbell and Stanley (1971) for discussion of pre-experimental, experimental, and quasi-experimental designs (e.g., the one shot case study, the one-group pretest-posttest design, the static group comparison, the pretest-posttest control group design, the posttest-only control group design, the time-series experiment, counterbalanced designs). The design (and measures) chosen should be based, to a great extent, on decisions regarding the type of standards which one wants to use in judging the descriptive data which is to be gathered, e.g., whether the standards used are to be relative (norm referenced) or absolute (criterion referenced).[5]

6. Designation as to time and place for data collection, in part, will be determined by the design which is chosen and, in part, by pragmatic factors, e.g., available person and material resources, cooperation of the people who are the sources of data, and so forth.

As the examples offered in this section suggest, educational programs can and should be evaluated on many levels. In addition, it should be evident that the concerns, issues and problems related to evaluating programs in both general and special education

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[5]To clarify this point further, it may be noted that the nature and scope of the sample(s) ("responders") are critical considerations, e.g., too small samples or non-representative samples can result in means and standard deviation which are poor approximations of the parameters of populations which are to be compared; the absence of appropriate comparison (control, contrast) groups can make it virtually impossible to use collected data to answer questions which may be of major concern; and so forth.

are not substantively different and that the process of evaluating such programs is in its early developmental stages.

Concluding Statement

Until there is a more definitive body of knowledge in the field of education and further development with reference to the processes by which we evaluate educational programs, it seems unlikely that education programs can be evaluated satisfactorily. Nevertheless, such programs must be evaluated, and those responsible for the programs should be held accountable. However, the term accountability must not be interpreted simplistically, or in a narrow context. At this time, appropriate program evaluation in education requires more than the systematic collection of immediate achievement and cost accounting data. In particular, it is felt that special education programs should be evaluated comprehensively in terms of their general contribution to current educational services, learning-instruction, and research, rather than in terms of such narrow criteria as pupil achievement in the "3R's" or per capita cost with reference to immediate pupil benefits. Clearly, there is a great deal which still must be learned about educating youngsters, especially exceptional children, and evaluating educational programs; we cannot afford to ignore the implications of these needs in the rush to establish strategies for accountability.

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SOME CONCLUDING REMARKS

To Avoid Misinterpretations

Someone once told me that each person is responsible for how he is interpreted. Therefore, the following comments are intended to help avoid misinterpretations of what I wanted to communicate by means of this monograph.

1) I did not say that there is nothing special about special education; (While all educators are viewed as being confronted with the basic concerns, special educators have the major responsibility for clarifying (a) when and how an answer formulated for the majority population requires modifications in order to be applicable to all and/or specific groups of exceptional individuals, (b) whether or not substantively different answers are required for some issues and problems, and (c) the nature and scope of such substantively different formulations.)

2) I did not say that all youngsters who are labeled as learning disabled, emotionally disturbed, educationally handicapped, or disadvantaged are devoid of disorders/deficits/dysfunctions or whatever term is preferred; (Type III learning problems are defined as youngsters who do have major disorders/deficits.)

3) I did not say that all youngsters who manifest school learning and behavior problems are the product of poor teaching; (School failure is hypothesized to be the result of a poor match between the pupil's characteristics and the program characteristics.)

4) I did not say that all youngsters with learning problems can be taught effectively in regular public school classroom programs. Indeed, in the case of Mark, it was recognized that it might not be

feasible to educate some youngsters appropriately even in a special public school classroom.

5) I did not say that there has been empirical validation (scientific evidence supporting the efficacy) of the hypotheses and practices presented in this monograph -- any more than there has been empirical verification of the efficacy of the assumptions and practices of currently established programs. (There have been experimental programs supportive of the hypotheses and practices discussed in this book, and references have been made to these efforts, and the original articles have been cited.)

6) I did not say that teachers should escape being held accountable for their instructional efforts. (What has been emphasized is the need for specifying situationally appropriate criteria.)

7) Finally, I did not claim to be presenting a balanced and unbiased perspective of the field. (The intention has been to present one professional's thinking and experimentation.)

Concluding Comment

At all levels and in all aspects, the field of education appears to be in a period of rapid transition. Some writers suggest that the whole educational system is "at a crisis point -- a point of desperately important choice" (Rogers, 1969). Those responsible for formal education in this country are being bombarded by questions, and few of these questions are simply interested inquiries; most represent major challenges to contemporary practices and require answers in

the form of effective action.

This is particulary true with regard to practices involving youngsters who have school learning difficulties. Children are given labels -- why? Pupils are placed in special classes -- why? Teachers complete training programs and still cannot help youngsters with problems learning -- why? Obviously, the task of providing meaningful answers to these questions requires the concerted efforts of many highly competent professionals from both general and special education, for the answers to such questions are not rooted solely in special education and should not be sought only from special educators. The challenge for the future is not simply to reduce labelling and minimize special class placement; the challenge is to find ways to reunify the field and thereby eliminate a major reason for the existence of so many inappropriate and/or parallel programs and practices. Youngsters like Barry, Jenny, Harold and Mark have a right to expect those who have their interests at heart to meet this challenge effectively.

Appendices

Appendix I

Some Key Variables to be Considered in Analyzing Educational Programs[1]

Categories of
Person Variables

Major Focus on:
STAFF, STUDENTS, SIGNIFICANT OTHERS

I. Types of Characteristics
   A. Group Identification Label (Roles)
      1. Staff
         (e.g., aide; assistant; regular teacher; specialist; professor; change agent; counselor; consultant; administrator; evaluator; researcher)
      2. Students
         (e.g., pre-school, elementary, or high school pupils; exceptional children; paraprofessional or professional in pre/ in-service training)
      3. Significant Others
         (e.g., relatives of students; interest group members; board of education members; trustees; legislators; taxpayers)
   B. Demographics
      (e.g., numbers involved; ethnicity; s-e-s; sex; age; geographic location; agency-organizational affiliations)
   C. Individual Differences
      (e.g., I.Q.; training; experience; personality)
   D. Criteria Used in Selection-Placement-Termination-Reassignment
      (e.g., performance; age; I.Q.; ethnicity; sex; s-e-s; type of task focus; number of course units or hours completed; homogeneity)

II. Areas of Involvement
   A. Areas of Task Focus
      (e.g., learning-instruction; service; advancement of the field)
   B. Areas of Procedural Focus
      (e.g., formulation of program rationale; program planning, implementation, and evaluation)

[1]At the outset of any such analysis, it is necessary to determine the nature and scope of a program's rationale, i.e., (a) the general orientation to the task of personnel preparation or school instruction, (b) the specific purpose assigned to and/or adopted by the program, and (c) the implications for desired program outcomes derived from the relevant body of theoretical and empirical knowledge.

III. Degree and Quality of Involvement and Commitment
  A. Personal
     (e.g., degree of responsibility assigned and assumed; satisfaction; quality of performance)
  B. Interpersonal
     (e.g., type of interaction--student-student, student-teacher, teacher-administrator, staff-interest group; number of interactions; time spent; quality of interaction)

Categories of
Task Variables[2]

Major Focus on:
LEARNING-INSTRUCTION, SERVICE, ADVANCEMENT OF THE FIELD

I. Areas of Task Focus
  A. Focal Areas for Learning-Instruction of Pupils
     1. Basic School "Subjects"
        (e.g., reading; math; languages; science; history; music; dance; art; sex education; physical education; hygiene; manual arts; vocational preparation; abstract thinking; creativity; aesthetics; social-emotional development; moral development)
     2. Prerequisites for School Learning
        (e.g., attention; listening; following directions; cooperative functioning with peers and adults; self-control)
     3. "Remediation" of Interfering Behaviors and Underlying Process Deficits (e.g., defiance; phobic behavior; receptive and expressive language deficits; memory deficits; auditory and visual perceptual deficits; gross and fine motor coordination problems)
  B. Focal Areas for Learning-Instruction of Education Personnel
     1. Tools Needed for Learning and Performing in the Program
        (e.g., procedures for inquiry and for task-oriented communication)
     2. Rationales for Educational Programs
        (e.g., societal; political; economic; ideological; knowledge base)

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[2] It is important to keep in mind that the variables in this table overlap and interact with each other. For example, in studying the instruction of education personnel who are to have an effect on pupils or on other education personnel, the investigator must be concerned with many of the person, task, and procedural variables listed in this table.

3. Program Planning
   (e.g., curricular; administrative; evaluational; instructional)
4. Program Implementation
   (e.g., initiation of planned program; formative evaluation; modification of planned program; ongoing management of program)
5. Program Evaluation
   (e.g., description; judgement)
6. Tools Needed to Help Advance the Field
   (e.g., methods of inquiry; development and diffusion of prototype program models)

C. Focal Areas for Service
   (e.g., persons; community; groups; agencies; associations; general public; the field of education)

D. Focal Areas for Advancement of the Field
   (e.g., research--applied, basic, program oriented; development--methods, materials, programs; diffusion--dissemination, installation, maintenance)

II. Types of Task Focus

A. Types of Learning-Instructional Focus
   (e.g., facts; concepts; behaviors; skills; attitudes)

B. Types of Service
   (e.g., information resource and resource finding; personal, familial and vocational counseling; consultation; provision of space and manpower for non-curricular activity)

C. Types of Field Advancement
   (e.g., descriptive, correlational, and experimental research; prototype and mass production of innovations)

III. General Task Characteristics

A. Quantitative Dimensions
   (e.g., actual and perceived difficulty; number of tasks to be accomplished; sequencing of tasks)

B. Qualitative Dimensions
   (e.g., intrinsic and extrinsic value)

Categories of
Procedural Variables

Major Focus on:
CURRICULAR, EVALUATIONAL, ADMINISTRATIVE,
AND INSTRUCTIONAL FACETS OF THE PROGRAM

I. Areas of Procedural Focus

A. Focal Areas for Rationale and Planning Activity

1. Shaping Forces
   (e.g., socio-political-eonomic; ideological)

2. Use of Knowledge Base
(e.g., procedures used to derive conceptual and practical orientations from the body of knowledge with reference to such topics as growth and development; learning and performance; motivation; instructional content and process; assessment, evaluation, and research processes; system ecology; field of education)
3. Intended Instructional and Non-curricular Antecedents, Transactions, and Outcomes
(e.g., criteria to be used for selection-placement-reassignment in a program, class, group, activity; planned use of methods, materials, and behavior settings; planned instructional, service, and research objectives)

B. Focal Areas for Program Implementation
1. Initiation of Planned Program
(e.g., procedures used to facilitate the participant's activation, focus, initaition of activity, maintenance of participation, knowledge of results)
2. Formative Evaluation
(e.g., procedures used to describe and standards used to judge instructional and non-curricular antecedents, transactions, and outcomes, procedures used in decision-making regarding needed modifications)
3. Modification of Planned Program
(e.g., criteria for change; procedures used to reformulate rationale and plan for the curricular, evaluational, administrative, and instructional facets of the program)
4. Ongoing Management of Program
(e.g., procedures used to manage materials, methods, behavior settings)

C. Focal Areas for Program Evaluation
1. Description
(e.g., procedures used to identify and measure intended and unintended antecedents, transactions, and outcomes)
2. Judgment
(e.g., standards used to make judgments; use of judgments in decision-making)

II. Types of Procedural Focus

A. Methods
1. Procedural Models
(e.g., oriented to--information processing, social interaction, person, behavior modification; oriented to--norms, individuals; degree of structure)
2. Activities
(e.g., assessment; instruction; input, practice, and communication-oriented experiences)
3. Techniques
(e.g., stimulus, response and feedback characteristics--variations with reference to modality involved; intensity;

duration; patterning; cueing; overt or covert responding; variations with reference to incentives and reinforcement such as intrinsic-extrinsic, formal-informal, systematic-unsystematic, amount, frequency, reward, punishment)

B. Materials
   1. Procedural Purpose
      (e.g., assessment; instruction; non-curricular)
   2. Medium
      (e.g., machines; films, audio and visual recordings, packaged programs, books, tests, and other verbal and graphic representations; special apparatus and real objects; people)
   3. Message
      (e.g., facts, concepts, skills, behaviors, attitudes)

C. Behavior Setting
   1. Organizational Format
      (e.g., nature of staffing pattern, student grouping, structure, supervision)
   2. Locale and Scope
      (e.g., public-private; school-community; degree of uniqueness; sparse-ample facilities and equipment; minimal-maximal availability and use)
   3. Climate
      (e.g., nature of interpersonal, intrapersonal, and physical environment)[3]

D. Transitioning Between Experiences
   (e.g., criteria used to determine need for transition such as performance, age, number of course units or hours completed; procedures used to facilitate transition)

III. General Procedural Characteristics

A. Quantitative Dimensions
   (e.g., actual and perceived difficulty; number of procedures involved; duration, pacing, and rate; sequencing of experiences)

B. Qualitative Dimensions
   (e.g., intrinsic and extrinsic value)

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[3]It is important to emphasize that it is the interaction key variables in a specific program (or class) which yields the overall environment, e.g., physical, intellectual, emotional, and moral climate.

Appendix II

Sequence of Major Tasks Involved in Planning,
Implementing, and Evaluating a School System Program

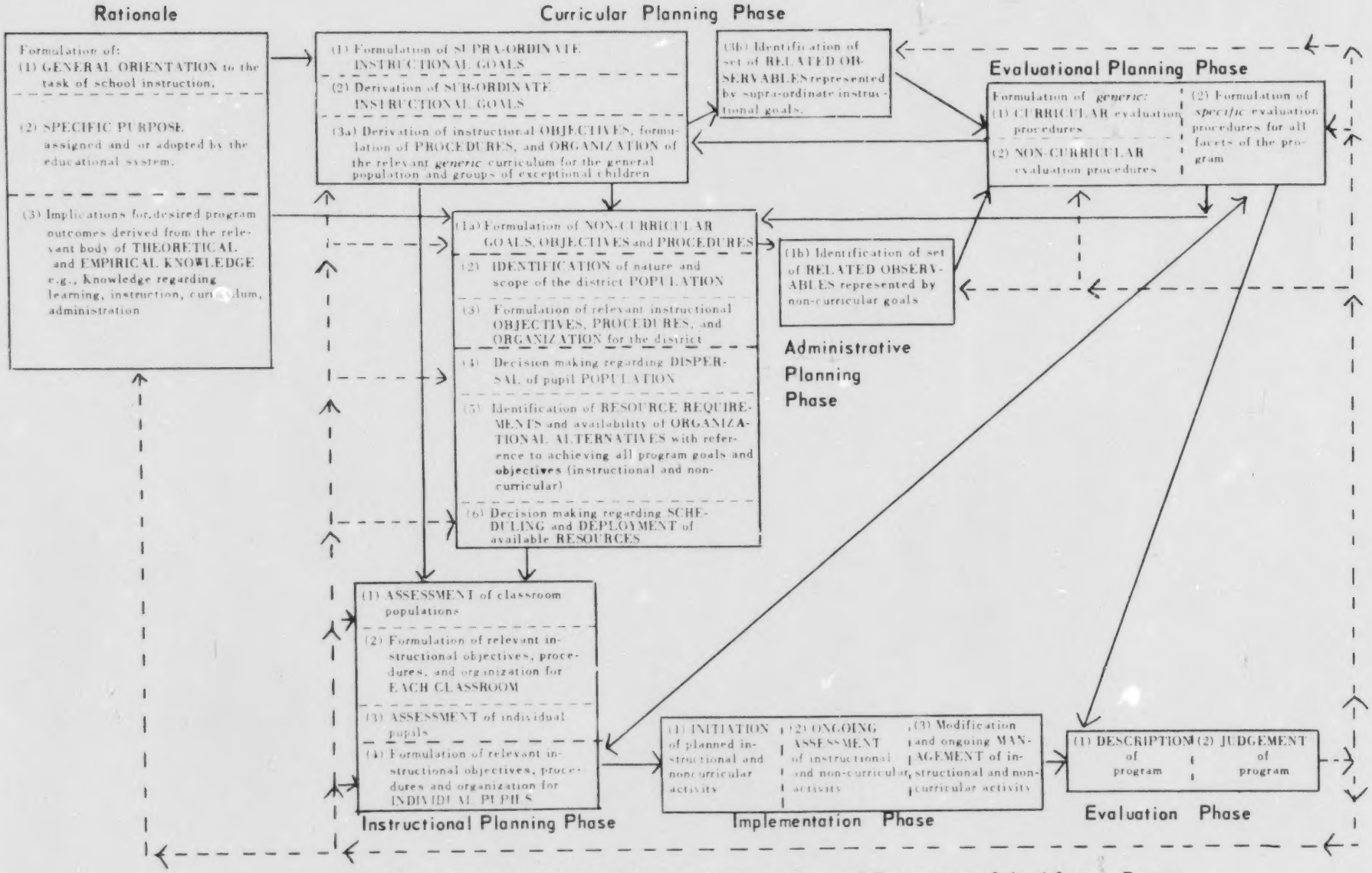
Rationale
Curricular Planning Phase
Formulation of:
(1) GENERAL ORIENTATION to the task of school instruction.
(2) SPECIFIC PURPOSE assigned and or adopted by the educational system.
(3) Implications for desired program outcomes derived from the relevant body of THEORETICAL and EMPIRICAL KNOWLEDGE e.g., Knowledge regarding learning, instruction, curriculum, administration
(1) Formulation of SUPRA-ORDINATE INSTRUCTIONAL GOALS
(2) Derivation of SUB-ORDINATE INSTRUCTIONAL GOALS
(3a) Derivation of instructional OBJECTIVES, formulation of PROCEDURES, and ORGANIZATION of the relevant generic curriculum for the general population and groups of exceptional children
(3b) Identification of set of RELATED OBSERVABLES represented by supra-ordinate instructional goals.
Evaluational Planning Phase
Formulation of generic:
(1) CURRICULAR evaluation procedures
(2) NON-CURRICULAR evaluation procedures
(2) Formulation of specific evaluation procedures for all facets of the program
(1a) Formulation of NON-CURRICULAR GOALS, OBJECTIVES and PROCEDURES
(2) IDENTIFICATION of nature and scope of the district POPULATION
(3) Formulation of relevant instructional OBJECTIVES, PROCEDURES, and ORGANIZATION for the district
(4) Decision making regarding DISPERSAL of pupil POPULATION
(5) Identification of RESOURCE REQUIREMENTS and availability of ORGANIZATIONAL ALTERNATIVES with reference to achieving all program goals and objectives (instructional and non-curricular)
(6) Decision making regarding SCHEDULING and DEPLOYMENT of available RESOURCES
(1b) Identification of set of RELATED OBSERVABLES represented by non-curricular goals
Administrative Planning Phase
(1) ASSESSMENT of classroom populations
(2) Formulation of relevant instructional objectives, procedures, and organization for EACH CLASSROOM
(3) ASSESSMENT of individual pupils
(4) Formulation of relevant instructional objectives, procedures and organization for INDIVIDUAL PUPILS
Instructional Planning Phase
(1) INITIATION of planned instructional and noncurricular activity
(2) ONGOING ASSESSMENT of instructional and non-curricular activity
(3) Modification and ongoing MANAGEMENT of instructional and non-curricular activity
Implementation Phase
(1) DESCRIPTION of program
(2) JUDGEMENT of program
Evaluation Phase

Figure The Sequence of Major Tasks Involved in Planning, Implementing, and Evaluating a School System Program.

Appendix III

ABSTRACT

Early Intervention Efforts to Alleviate Mental Health and Educational Problems: Some Critical Questions

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The following three issues, encountered in community oriented early identification and intervention programs, are discussed: (1) negative biasing impact of labeling, (2) segregation for purposes of intervention, (3) choice of intervention strategy. The major points elaborated are: (a) Negative biasing can be combated by institutionalizing positive expectations, success experiences, and internalized attributions; (b) Experimental efforts should focus on the resources necessary to cope with the particular problems of both in situ and segregated intervention programs; (c) In place of current single faceted views of intervention, a two step, community and individual oriented sequential intervention process is offered.

EARLY INTERVENTION EFFORTS TO ALLEVIATE MENTAL HEALTH AND EDUCATIONAL PROBLEMS: SOME CRITICAL QUESTIONS

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Since 1970, we have been involved in a five year, NIMH funded experimental program which (1) identifies kindergartners who manifest or are likely to manifest mental health or educational problems and (2) intervenes to prevent such problems. Our activities have caused us to deal with several major issues and problems which confront community oriented intervention programs in the fields of mental health and education. Three of these issues are discussed here. They bear upon (1) the potential negative biasing impact of identifying individuals as problems, (2) the segregation of individuals with problems for purposes of intervention, and (3) the choice of intervention strategy.

Negative Biasing Impact of Labeling

There is a long standing debate over the functions and dysfunctions of classification schemes in the mental health field and more recently in special education. At the heart of much of the concern over labeling is fear of the negative biasing impact which may result simply from labeling an individual as a "problem".

Such a biasing phenomenon is broadly discussed by Merton in his well known paper on "The Self-Fulfilling Prophecy" (Merton, 1948). The origin of this formulation, as a basic social science theorem, is attributed to W. I. Thomas who states: "If men define situations as real, they are real in their consequences." In recent years, such phenomena have been studied by behavioral scientists and others who are interested in "biasing variables", and has been popularized by the controversial Rosenthal and Jacobson studies of interpersonal self-fulfilling prophecies (1968). Most explanations of the motivation underlying prophecy fulfilling behavior appear to invoke a cognitive consistency model drawing on the writings of such theorists as Allport, Festinger, Kelly, and Rotter.

While convincing empirical verification and explication of the expectancy effect and the mechanism(s) underlying it are yet to be offered, such a phenomenon must be a matter of considerable concern to anyone responsible for labeling individuals as problems for purposes of intervention or research. Obviously, since efforts to identify problems early are largely motivated by a desire to alleviate such problems, it would be ironic, to say the least, if the very process of identification resulted in a self-fulfilling prophecy of failure and maladjustment. The question then is how can the negative biasing impact of identifying individuals as problems be avoided.

The answer is suggested by a frequently ignored counterpart of the self-fulfilling prophecy, namely, the "suicidal prophecy" which Merton describes as so altering the course of human behavior as to make the

prophecy destroy itself. For example, a first grade teacher who sees a pupil as a likely learning problem may take special steps to help the child, with the result being that the youngster succeeds. The suicidal prophecy or, as we prefer to call it, the self-correcting prophecy, in effect is synonomous with all successful problem-prevention efforts which are based on predictive evaluations.

From this perspective, a major task confronting large scale problem-prevention programs is that of institutionalizing positive expectations that predicted problems will be prevented. In this regard, it is interesting to note that Merton states "The self-fulfilling prophecy ...operates only in the absence of deliberate institutional controls" (page 210). For our project, the task becomes that of developing an early intervention program in which all participants expect from the onset, and continue to expect, that failure and maladjustment can be alleviated and prevent. In this connection, we view a critical element of such a program as being a set of experiences which result in immediate and continuing successful performance which identified youngsters and their therapists, teachers, and, hopefully, parents can attribute to their efforts. This view is supported by experimental findings which show that (a) expectations for future success and failure reflect previous success and failure experiences (Adelman, 1969) and (b) causal attributions influence the likelihood of pursing new experiences (Weiner, 1972).

In providing and reinforcing positive expectations, however, one must avoid the other horn of the expectation dilemma - namely, promising

too much. The consequences of false positive expectations can be as serious as those created by negative labeling. Thus, while an early identification and intervention program should offer positive expectations, such expectations should represent realistic outcomes, tinged with hope, and not wishfulfilling fantasies.

Isolated vs. In Situ Intervention

Related to the problem of the negative biasing impact of labels is the question of whether individuals with problems should be segregated for purposes of intervention. There is a clear trend in the mental health and special education fields of advocacy for and implementation of *in situ* intervention.

With reference to behavioral disorders, there has been a strong trend toward maintenance of disturbed individuals in the community setting. In special education, the counterpart of this trend has been the effort to maintain and reintegrate some groups of exceptional children into regular classrooms. However, while the sentiment and a number of recent legal decisions have been against segregated intervention, the empirical evidence cannot be viewed as definitive.

The major argument *for* special intervention settings is that the needs of some individuals cannot be appropriately met in regular settings. Against this position, it is maintained that special settings have not been proven effective, that individuals placed in such settings are stigmatized and only have negative models to emulate, that such placements tend to be permanent, and that negative attitudes toward individuals with problems are engendered and/or reinforced, and so forth. After

making the above negative points, those who advocate doing away with special settings usually fail to mention that many of these same problems exist, and are even exaggerated when individuals with problems are maintained *in situ*.

Unfortunately, the rhetoric tends to draw attention away from the basic problem which is the lack of intervention capability for producing definitive benefits for individuals with problems. And the crux of this problem is the lack of professional competence and appropriate support mechanisms. The question is not whether individuals with problems should be placed in special settings; rather, the questions to be answered are: Given highly competent professionals and appropriate support mechanisms, (1) what proportion and what categories of the problem populations do not need to be placed in special settings, and (2) can the special settings become an effective placement for those individuals who cannot be helped *in situ*. (And, if the special setting is not effective for such individuals, the problem becomes one of developing and evaluating other forms of intervention.)

With an awareness of the above considerations, our project is implementing early intervention strategies both in special and regular classrooms and will compare their effectiveness. Specifically, the special class approach limits enrollment to two years for 10-11 first graders who have been identified as high risk pupils, and it incorporates a specially trained and selected teacher who is supported by weekly consultation and a variety of referral sources. The contrasting approach, using the regular classroom, assigns an average of three high risk

pupils per first grade class of approximately 30 pupils and employs a resource model. This model involves a specialist-teacher circulating among the first grade classrooms in a particpating school to assist each first grade teacher in upgrading her classroom program and to help her learn more effective procedures for coping with learning/behavior problems. Consultation for the specialist-teacher is provided, and referral sources are available. Under both approaches, special and regular classes, all parties concerned are enlisted as advocates who in their respective roles as teacher, resource, parent or child, help ensure the positive preventive and intervention direction of the program.

Intervention Strategies

In selecting an intervention strategy, one obviously wishes to choose that approach which best solves the "problem". Unfortunately, it is not always clear what the problem is. In the case of our high risk children, they display a variety of deviant behaviors and deficits, which if left unresolved, would contribute to school failure and malajustment. Although they all have at least normal I.Q.'s, these youngsters tend to do poorly on perceptual-motor tasks and may display deficits in sequential memory and other facets of recall, tend to be impulsive, inattentive, are often aggressive, overly dependent, and fail to follow directions. This enumeration is by no means exhaustive. And, although all the children do not display the entire range of problems and though the children can be sub-divided into groups based on the predominant behavioral cluster, one still is confronted with a complex array of

deviations, for which an intervention plan must be formulated. The orientation to such intervention may be psychological, educational, and/or medical, and the focus may be molar or molecular and may be directed at the root of the problem or at specific symptoms. In general, however, regardless of orientation or focus, intervention usually is conceived as a single faceted process consisting of and limited to specific procedures directed toward specific individuals.

In contrast, we have found it helpful to think of the intervention process as involving a two step sequence with the initial step being the modification of the behavior setting. More specifically, the first step consists of establishing an individual-oriented and motivationally enriched environment (program), applicable to normal settings. Then, if necessary, up to three sequential and hierarchical types of remedial intervention are employed, in a sequence which is predetermined by the success or failure of the preceding intervention. That is, if after the first step is implemented there are still youngsters who manifest problems, then the sequence of intervention encompassed in the second step is initiated.

The essence of step one is the establishment of an environment where individual differences in development, performance, and motivation are accommodated and fostered and where a greater degree of deviation can be tolerated or compensated for. With reference to school learning and behavior problems, for example, such an approach involves eliminating many inappropriate environmental demands and deficiencies which are the continuing cause of a significant number of such problems.

The three sequential interventions which are included for possible use during the second step involve three different levels of interventional focus. Level A emphasizes maintaining the focus on mastery of basic school subjects and age (developmentally) appropriate behavior by using a variety of techniques to reteach the specific behaviors and skills with which the youngster is having difficulty. Level B emphasizes the development of the prerequisites that are needed before school subjects and age-appropriate behavior can be mastered. Level C attempts to deal with any pathological behaviors or underlying process dificits that may interfere with the manifiestation of appropriate learning or behavior.

It should be noted that in this process no formal tests are employed to specify etiology or level of intervention. Assessment procedures are employed only to determine an individual's need at a particular step and level. In effect, both the individual's type of problem and the level of intervention are identified only after the impact of intervention becomes apparent.

There is a link between this intervention strategy and the problems of location of intervention setting and of labeling to which we have previously alluded. In order to minimize the potential negative consequences of early identification, and to utilize an <u>in situ</u> setting, one must have some opportunity to influence the character of that setting. To restate this proposition, a community oriented intervention model has

many advantages over alternative intervention approaches but the success of such a model hinges on one's ability to modify the behavior of significant community agents. That task is the unstated, but no less demanding, correlate of the intervention model, which we have described here.

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Appendix IV

Motivation and the Classroom

Educators frequently talk about motivating their students. What does this mean?

First let's understand what the term motivation means. Most psychologists use the term motivation to encompass an inner condition that causes an organism to initiate or direct its behavior toward a goal.* That is, the focus is on inner needs, desires, and purposes. Thus while extrinsic factors such as rewards, grades, etc., do shape a person's needs desires and purposes, such factors should not be equated with motivation. Motivation is inside the organism, not something which the teacher can dispense.

Consequently, for purposes of discussing motivation in the classroom motivation is defined as the degree to which a pupil views his or her classroom activities and tasks as

(a) meaningful,

(b) interesting,

(c) worth the effort;**

(d) attainable through an appropriate amount of effort.**

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*The term motive is used to connote a tendency to seek a specific kind of goal. Such goals may be short term or long range. Although motives are major determinants of behavior, they are only part of a larger pattern of inner processes and external conditions which interact to determine human behavior

**While the terms meaningful and interesting probably don't need amplification here the phrases "worth the effort", and "attainable through an appropriate amount of effort" probably do.

Worth the effort -- reflects the role of both intrinsic and extrinsic rewards and consequences, e.g., activities and tasks which lead to positive social or material reinforcement or which

(Please note that the emphasis is on the pupil's view of the situation; it is not sufficient for the teacher to think the activities and tasks are meaningful, interesting, etc.)

In this context, a major problem confronting all teachers is that of structuring a varied enough program so that each student can find an activity or task which he or she will pursue vigorously and pe. stently. At the same time, of course, the teacher must be satisfied that such strongly directed and activated behavior is commensurate with attaining the goals of formal education.

Contributing to this problem is the fact that the teacher does not control many of the social demands and rewards and consequences which shape the goals students seek and the means used to attain such goals. Nevertheless, there is ample opportunity for a teacher to capitalize on basic psychological needs in facilitating classroom learning. In this connection, the teacher should understand the basic core of psychological needs which seem to be operating in normal development and functioning, e.g., curiosity; wanting to know about the world around one and to see order and meaning in it; wanting to feel adequate, content, and secure; wanting to experience love and affiliation; wanting to feel that one belongs and is approved; wanting to see oneself as being of worth and wanting to enhance self-worth; wanting to have a sense of direction, with hope of success in one's efforts; wanting

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allow the student to avoid punishment.

Attainable through appropriate effort -- reflects the impact of perceived task difficulty, e.g., if an activity or task is viewed as too easy, it may be viewed as not worth doing; if too hard, it may be viewed as too threatening.

to develop and use one's potential. Obviously, such needs are not independent of each other nor are they independent of the social context in which they evolve and are expressed. The teacher's job, then, can be conceptualized as one of structuring the classroom program to maximize the impact of those motivationally-relevant factors which will contribute to the attainment of the school's goals and to minimize the impact of other factors.

Stated more simply, it should be clear that it is harder and relatively uninteresting for a student to focus on things that appear to be unrelated to his or her key motives; in contrast, a student will devote extraordinary time and energy to activities he or she views (for whatever reasons) as meaningful, interesting, worth the effort, and attainable through an appropriate amount of effort. What this means to the teacher is that since few activities and tasks will elicit the same degree of motivation from every student in the class, the teacher should allow for choice and self-selection, with a variety of possibilities to choose from. And when the variety has been sampled, there should be new possibilities available. (In effect, what is needed is an institutionalization of the Hawthorne effect.)

Finally, it is important to note that motivational selectivity affects not only the learning and thinking processes, but even more basically, attention and perception. Therefore, teachers must recognize that many learning and behavior problems manifested by their pupils (e.g., auditory and visual misperceptions, "acting out" behavior) primarily may reflect a poor match between the

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(Some parts adapted from J.C. Coleman, Psychology and Effective Behavior, Scott, Foresman and Co., 1969.)

student's interests and needs and the activity in which he or she is involved (and not a neurological or emotional defect). The best "remediation" (or disciplinary or control technique) in such circumstances is to help the student become involved in an activity which he or she will view as meaningful, interesting, worth the effort, and attainable through an appropriate amount of effort.

Appendix V

Instructional Procedures: A Generic View

The following material is adapted from a monograph by the author which was prepared in conjunction with this work (Adelman, 1973). Presented in that monograph is a conceptual model of the major phases and tasks involved in planning, implementing, and evaluation educational programs. As may be seen in the figure presented in Appendix II of the present work, such programs are viewed as involving seven phases of activity, with each phase encompassing a set of sequential tasks. The seven phases are: (1) a phase devoted to formulating an overall program rationale, (2) a curricular planning phase, (3) an evaluational planning phase, (4) an administrative planning phase, (5) an instructional planning phase, (6) an implementation phase, and (7) an evaluation phase. What is presented below is a brief summary dealing with the key facets of the curricular and instructional planning and implementation phases.

Curricular Planning[1]

Once a set of generic instructional objectives have been evolved, the focus of curricular planning shifts to the problem of establishing a set of generic instructional procedures which can

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[1] The emphasis here strictly is on planning appropriate instructional procedures (as contrasted with planning curricular content). A discussion of the complex task of decising what constitutes appropriate curricular content is beyong the scope of this presentation. For our purposes here, it must suffice to note that such decision making involves the application of criteria for judging (1) the "power" (usefulness) of what is to be learned--this includes questions of construct validity and content generality--and (2) the "economic" feasibility of what is to be taught--this includes consideration of (a) the total number and level of objectives to be

facilitate the acquisition of the objectives by the students. Such procedures may be thought of in terms of what the instructor does in order to facilitate the students' involvement in appropriate experiences. As indicated in Figure 1, (a) the instructor's procedural concerns can be categorized as involving methods, materials, and behavior settings, and (b) the student's involvement can be categorized as academic stimulation, practice, and communication-oriented experiences.

With reference to these categories of procedures and experiences, such questions arise as: What methods and materials should a program participant experience? Where and how long should these methods and materials be experienced? Who should be involved in facilitating the instructional process? These questions serve as a general framework for the discussion which follows.

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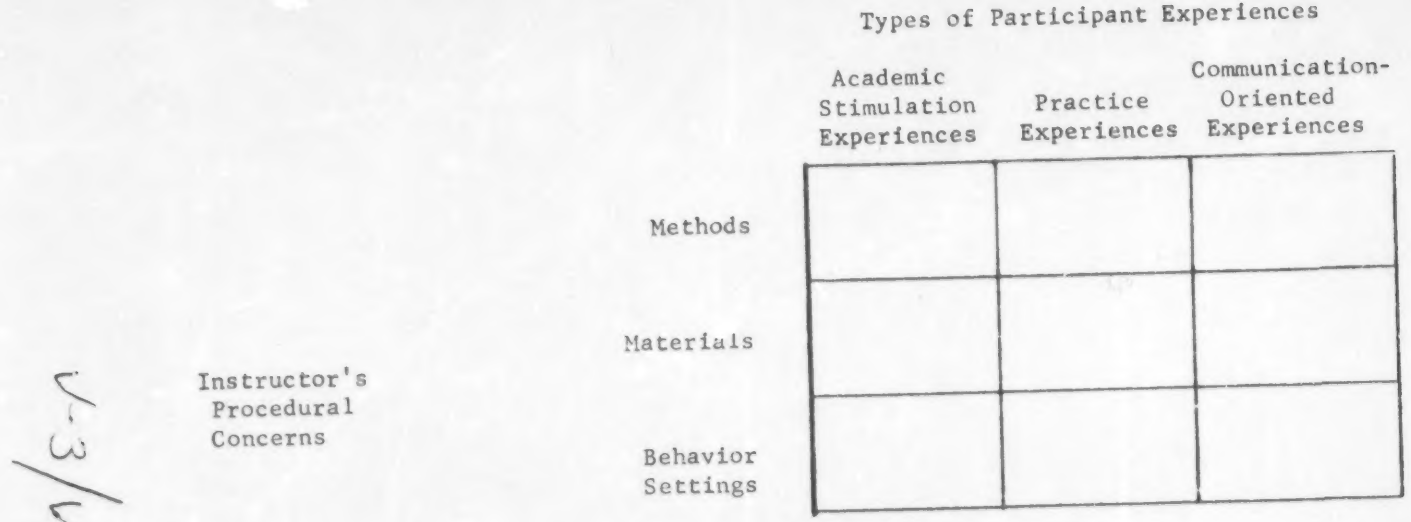
accomplished using a given amount of time, space, teacher competence, etc., and (b) the characteristics of the individual to be instructed. With specific reference to the topic of instructional objectives, it may be noted that objectives which are both potentially powerful and economical generally will encompass more than one observable behavior and will be stated at a somewhat low level of specificity. (The lower the level of specificity, the higher the level of abstraction.) From this perspective then, the argument that all instructional objectives should be stated with a high degree of specificity is seen as fallacious. What is important is whether the observables encompassed by an instructional objective are identified and understood. (See Adelman, 1973 for a further discussion of these points.)

It also may be noted that in the literature on the use of objectives in curricular and instructional planning some writers distinguish between general, terminal and enabling objectives, each of which is seen as serving a different purpose. Ammerman and Melching (1966) state: "The general objectives consists of statements of general performance, such as jobs, duties, functions, or other activities that incorporate more than one meaningful unit of performance. ... They are useful as very brief descriptors of the instructional objectives, but they are too general to be meaningful and useful in designing learning "experiences" (p. 76 in Merrill, 1971). "A meaningful unit of performance is an activity that would be done in its own right in the intended work situation.... Student performance objectives



V-3/V-4

Figure 1. Instructor's Procedural Concerns With Reference to the Types of Experiences in Which Participants will be Involved.

The answers to these questions require: (1) the identification of a variety of potentially useful procedures (and, where necessary, an indication of how to locate and use such procedures); and (2) the selection of those procedures which can appropriately facilitate the acquisition by the students of the program's instructional objectives (see Figure 2). (The selection of procedures involves the assessment of time, cost, and performance demands for alternative procedures--followed by the elimination of procedures which are inappropriate becuase such demands are unrealistic or unfeasible at the present time.)

A general discussion of these topics and questions is presented elsewhere (Adelman, 1973; Carpenter and Hull, 1973). For our purposes here, it will suffice to highlight the following points.

(1) Methods can be differentiated into models of teaching, activities, and techniques and defined as follows:

Models of Teaching - "a pattern or plan, which can be used to shape a curriculum or course, to select instructional materials, and to guide a teacher's actions." The model used by an instructor has "...much to say about the kinds of realities which will be admitted to the classroom and the kinds of life-view which are likely to be generated as teacher and learner work together" (Joyce and Weil, 1972b, p. 3). It should be noted that some models are more prescriptive than others with reference to the types of activities and techniques which are to be employed.

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have been established, the next activity is directed at determining what the student needs to learn; that is, to determining the enabling objectives...the component actions, knowledges, skills, and so forth, the student must learn if he is to attain the terminal objectives." (p. 75 in Merrill, 1971).

V-5/V-6

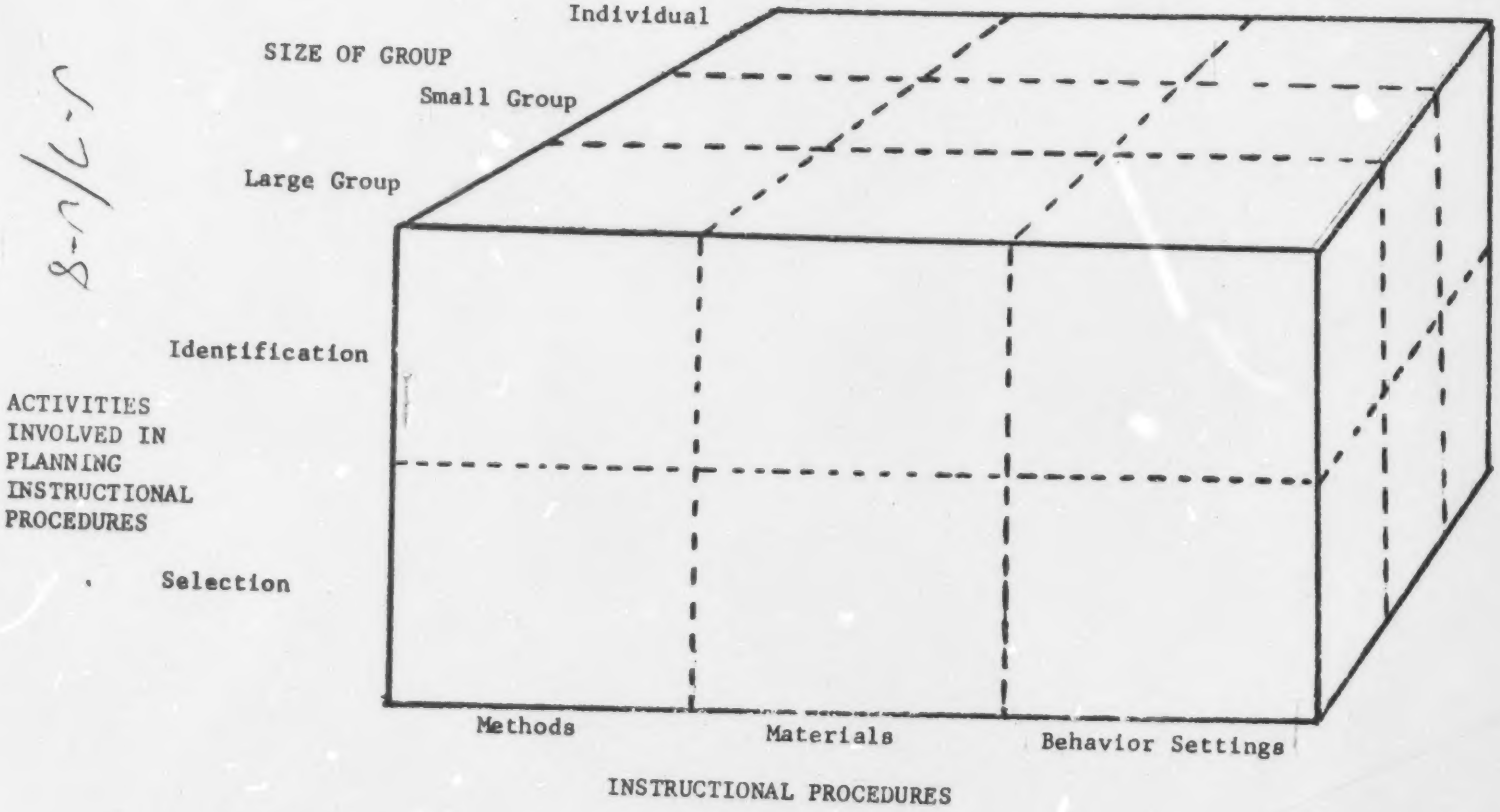

Figure 2. Some Key Factors Related to Planning Instructional Procedures

Activities - specific types of experiences which a student can do alone or with other students and/or with instructors, e.g., academic stimulation such as reading a book, practice such as teaching a child, communication-oriented experiences such as group meetings. Such experiences may or may not be prescribed by a particular model.

Techniques - building certain specific characteristics into the stimulus, response, and feedback facets of an activity, e.g., use of varying combinations of sense modalities such as Fernald's tracing (ACKT) technique for learning words; varying intensity, duration, patterning, cueing; requiring overt responding; variations with reference to incentives and reinforcement such as contingency management.

(2) In discussing instructional (including related assessment) materials, it is helpful to differentiate between the medium and the message. For example: Media include (a) machines, (b) prepared materials such as films, audio and visual recordings, packaged programs, textbooks, tests, and other verbal and graphic representations; (c) special apparatus and other real objects; and (d) the instructor and other resource people. The message is the instructional content which we have categorized in this presentation as being facts, concepts, skills, behaviors, and attitudes.

At times, the distinction between methods and materials and, indeed, between content and procedures tends to be too artificial. For example, with great relevance for this discussion and anticipating the subsequent discussion of curriculum organization, several writers have identified a curricular concept called an organizing center. Such a center is "the theme, topic, problem, or project which gives immediate purpose and direction to the undertaking of a number of learning experiences.

The popularity of an organizing center stems from the assumption that learning best occurs when the learner is confronted with a problematic situation. In the resolution of the problem, relevant information, methods, and details acquire significance. Further, the tension generated by the problem is believed to "motivate" the learner" (McNeil, 1965, p. 79). (It should be remembered that the organizing center is only a focal point for facilitating learning with regard to specified instructional objectives, e.g., the program participants' completion of a project is of secondary importance to their learning the content represented by the instructional objective.)

(3) Once decisions are made with reference to what methods and materials might be used to accomplish the generically formulated instructional objectives, the focus in curriculum planning turns to the questions which involve decision making regarding the behavior settings and the length of time to be devoted to various experiences. Generally speaking, (a) the behavior settings may vary in terms of organizational format for instruction (e.g., staffing pattern, student grouping), type, locale, and scope (e.g., public-private; school-community, degree of uniqueness; sparse-ample facilities and equipment; minimal-maximal availability and use) and climate (e.g., interpersonal, intrapersonal, physical) --see Table 1; (b) a student's experiences may vary temporally from brief to extensive and from intermittent to continuous involvement; and finally, (c) such experiences may be designed to expose students to just a few or to a great variety of transactions.

Table 1

Behavior Settings

Climate	Type, Locale, and Scope	Organizational Format
1. Interpersonal	1. Type and Locale (e.g., private-public; school setting--preschool to university; community setting; specific unique setting such as a preschool class for the orthopedically handicapped; general setting such as a regular public school classroom)	1. Student Grouping (e.g., individual study course, seminar, large lecture class; ability, interest, need, or random grouping)
2. Intrapersonal	2. Scope (e.g., sparse-ample facilities and equipment; minimal-maximal availability and use of facilities and equipment)	2. Staffing Pattern (e.g., horizontal or vertical teaming; use of aides, volunteers, tutors, specialists)
3. Physical		3. Structure (e.g., instructor-, student- or joint-controlled; specified or open-ended transactions and outcomes; whether products are required or not)
		4. Supervision (e.g., comprehensive apprenticeship--self-evaluation; systematic ratings--off-the-cuff observations)

(4) With reference to the question of who should be involved in facilitating the instructional process, decisions regarding who will have primary responsibility likely will vary with the locality. This is true for specific activities and for the program as a whole. In both cases, who has the responsibility is probably not as important as that someone has it, for it is that someone who must be certain that there is coordination and integration.

(5) After potentially useful procedures have been identified, the next major activity involves the selection of those procedures which appear to be most appropriate for achieving the generic instructional objectives. In doing such selection, it has been suggested elsewhere in this monograph that the problem is first of all one of determining which procedures have the most potential for (a) attracting and focusing program participants on relevant stimuli; (b) initiating and maintaining appropriate participation; (c) producing appropriate communication between instructors and program participants regarding results; and (d) strengthening preceding learning and behavior patterns of program participants and instructors. Given two procedures which are of equal potential with regard to such criteria, selection would be based on the procedure's likelihood of producing "side effects". That is, if one of the procedures not only produces the desired instructional outcomes, but also produces undesired side effects, it would not be given preference. In contrast, a procedure which produces both the desired outcome and other positive outcomes (or reinforces the desired outcome) would be strongly favored.

After appropriate instructional content and procedures have been identified and selected, there is a need for patterning and sequencing, e.g., determining whether there is a need for certain instructional objectives and procedures to be placed in a particular juxtaposition to one another. As should become clear from the following discussion, in effect, one organizes the content and then, if necessary, readjusts the procedures which have been selected for use in teaching that content. It also should be evident that such organizational problems permeate a program's curriculum. That is, each unit or module has to be organized internally and has to be coordinated and integrated set of instructional objectives and procedures which relate to a specific sub-area of instructional focus.) In discussing such curriculum organization, McNeil (1965) suggests that "good curriculum organization meets three specifications: (a) There is planning for review and reiteration of that which has been learned...(this is called) the criterion of continuity. (b)... the curriculum must extend that learning in depth...(called) the criterion of sequence...(c) The skills, values, and concepts taught in one area of study should be related to the other areas of study...the criterion of integration. ..."(pp. 68-69). McNeil continues: "The heart of the organizational problem is being clear about the instructional objective and identification of the steps necessary to its attainment. Subsidiary questions involve how best to order these steps for effective learning.... Unfortunately curriculum inquiry has not advanced to the place where we know what constitutes necessary steps in the attainment of objectives. Many so-called prerequisites are just so much busy work" (pp. 69-70).

Planning for equivalent and analagous practice (e.g., review and reiteration) is a rather self-evident activity. Sequencing, however, requires some organizing principles, and a number of suggestions have been offered, e.g., chronological presentation, emphasis on breadth or on depth of application, easy to difficult, part to whole, simple to complex, concrete to abstract, theory then practice, familiar to unfamiliar, and so forth. Unfortunately, it is uncertain when a specific principal should be applied. That is, while a part to whole sequence may be appropriate for accomplishing one objective, a whole to part sequence might be more appropriate for another objective, and a combination of both may be more appropriate for a third.

If the situation is viewed as bad with regard to sequencing principles, it can only be viewed as horrnedous with regard to organizing principles for facilitating the integration of the various components of instructional content.[2] It is clear that the knowledge base for evolving a coordinated and integrated curriculum is very weak. Thus the task remains more of an art than a science or even a craft.

In practice, it appears as if few programs have even attempted significant coordination and integration. Most commonly, the different experiences are initiated haphazardly, with little awareness of what competence a student already has acquired and with little, if any, coordiantion with other concurrent or future activities or with other program experiences.

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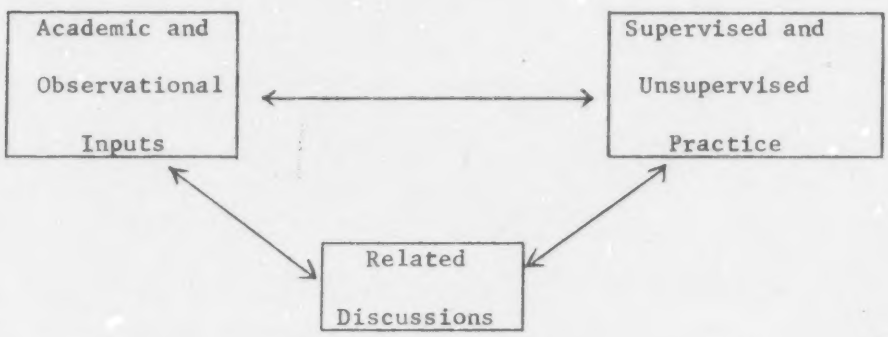
[2]One relevant construct frequently emphasized in the literature on change is that of synergy. This construct emphasizes the need for redundancy and diversity (e.g., repeated inputs from different sources), and, hopefully, synchronicity. As Havelock and Havelock (1973) state: "The simplest example of synergy occurs when two separate individuals give the same piece of advice. Two inputs from two different sources are far more persuasive than the same input from only one source. In a sense, synergy produces a validation of experience."

The types of planned relationship between academic, observational, and participatory experiences which should be occuring is represented in the diagram below. As may be seen, there should be constant interaction



between the various types of experiences. For example, when a demonstrable concept or technique is introduced academically, the student should have the opportunity to observe a demonstration and to engage in unsupervised practice, as well as in supervised practice where he can receive guidance, feedback, and additional demonstrations; in addition, he should have the opportunity to raise questions for discussions based on his academic and participatory experiences. In turn, the feedback which these discussions provide should help those responsible for the program to determine what should be presented, practiced, and discussed subsequently.

In organizing these experiences, the notion of organizing topics and centers mentioned earlier is a very helpful concept. A corollary idea which has been receiving increasing attention recently is the concept of instructional modules.

In view of the complexity of the various facets or curricular planning which have been summarized in this section, it seems evident that such planning requires a good deal of resources, particularly expertise with regard to curriculum development. Of course, as has been suggested above, even the most expertly planned curriculum requires effective implementation. And, prior to its implementation, there is a need for appropriate evaluational, administrative, and instructional planning. Again, it is emphasized that these topics are discussed elsewhere (Adelman, 1973; Carpenter and Hull, 1973; Duchon, Hull, and Carpenter, 1973). In the following section discussion is limited to summarizing some key points with reference to instructional (as contrasted with curricular) planning.

Instructional Planning. The reader probably already has recognized that much of the planning which has been discussed as occurring during a curricular planning phase does not happen currently. Therefore, the general tasks involved in curricular planning are left for the instructional planning phase. This, indeed, is unfortunate since, as should become clear in this section, the specific tasks involved in the instructional planning phase are demanding enough.

In contrast to curricular planning, instructional planning should deal with the problem of deciding the specific nature and scope of a particular program's instructional content and process. Three of the major tasks of instructional planning are explored here: (1) the formulation of relevant instructional objectives, procedures, and organization for students as a group; (2) the assessment of each student's interests, needs, behavior patterns, and response capabilities; and (3) the formulation of relevant instructional objectives, procedures, and organization for individual students.

Permeating these three tasks are the processes of: (1) identifying the types and location of available assessment procedures and curriculum packages (e.g., an organized set of generic instructional objectives and procedures and related evaluation procedures); (2) adopting or adapting appropriate and feasible assessment and curricular resources when they are available; (3) developing new assessment and curricular resources when necessary and within the limits proscribed by time, cost, competence, and so forth (see Figure 3).

If appropriate curricular and administrative planning have been accomplished, the first task of instructional planning encompasses the following steps: (a) reviewing the assessment data on the students who have been admitted to the program (with an awareness of the limitations of such data), (b) identifying and selecting curriculum and evaluation packages which are judged to be appropriate for such students, and, if necessary, (c) modifying (adding to, altering, deleting from) such packages. Such planning can be accomplished prior to meeting with the students and provides much of the framework for implementing instructional and evaluational activity.

In addition, however, if a program is to be effectively personalized, instructional planning also must involve finding out more about the individual students than can be found in the initial assessment data. Such supplementary assessment can be accomplished through additional testing, questionnaires, interviewing, and observation. We have found it particularly helpful to set up the first few contact sessions as orientation and assessment sessions. The major purposes of these sessions is to gather

TASKS	PROCESSES: Identifying available assessment procedures and curriculum packages	PROCESSES: Adopting or adapting appropriate assessment and curricular resources	PROCESSES: Developing new assessment and curricular resources
Formulation of relevant instructional objectives, procedures, and organization for students as a group.			
Assessment of each student's interests, needs, behavior patterns, and response capabilities.			
Formulation of relevant instructional objectives, procedures, and organization for individual students.			

Figure 3. Key Tasks and Processes Related to Instructional Planning

information and to involve the student in planning variations in environmental circumstances in order to facilitate an appropriate match between (a) a student's interests, needs, behavior patterns, and response capabilities and (b) the instructional objectives, procedures, and organization. The success of such instructional planning will be reflected by the reduced amount of trial and error and redundancy required to produce appropriate learning outcomes and the addition of personalized procedures and outcomes. For example, such "pre-assessment" can result in (a) the addition of instructional objectives designed to develop pre-requisite skills which a student may not have acquired, (b) the deletion of objectives in areas where the student already has attained the appropriate degree of mastery, and (c) the addition of "enrichment" opportunities for specific individuals.

The assessment procedures which provide the information needed for such instructional planning can be categorized (as can instructional practices) in terms of whether they are designed for large groups, small groups, or an individual. Thus, we label practices designed for use with large groups "broad-band" practices and those designed for small groups or individuals are categorized as "narrow-band" practices. In this context, it can be emphasized that in planning which broad-band teaching practices to use, the instructional planner should know about the <u>general</u> interests, needs, behavior patterns, and response capabilities of the students in the program. Fortunately, (s)he may already know something about such factors because of knowledge about past students and available normative

data about human behavior. Assessment in such instances, then, essentially is a matter of determining whether or not most of the students correspond to such norms. If a particular group of students varies significantly from such norms, the assessment data provide useful information for planning broad-band instructional practices which will allow for an "appropriate match" for the large majority of students. For economical and other reasons, such assessment data can and should be gathered through the use of broad-band assessment practices. In planning which narrow-band instructional practices to use, the instructional planner should know about the specific interests, needs, behavior patterns, and response capabilities of a particular student. (Again, our knowledge of behavioral norms will be helpful.) Assessment in such instances is oriented to the individual and should be designed to provide specific guidance for varying environmental circumstances to facilitate learning for that individual. While broad-band assessment practices (e.g., standardized aptitude tests) usually can be adopted or adapted for such purposes, narrow-band assessment practices (e.g., personal interviews) usually are necessary as well.[3]

Based on such broad-and narrow-band assessment data, then, instructional planning can be directed at making any necessary and appropriate modifications with reference to available curricular and evaluative resources. That is, (a) available curricular and evaluation resources can be adopted or adapted and, if necessary, (b) new curricular and evaluation resources can

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[3] Merrill (1971) discusses three types of pre-tests: (1) prerequisite pretests, designed to determine whether the student has acquired needed antecedents, (2) diagnostic pretests, designed to determine if the student already has acquired aspects of the intended instructional outcomes, and (3) terminal behavior pretests, designed to see if the student already is performing to criteria with reference to intended instructional outcomes.

be developed. Once these instructional planning activities are accomplished, final pre-instruction decisions can be made regarding scheduling, grouping students, and deploying "staff".

Implementing Instruction At this point, it is worth briefly summarizing some key facets of implementing instruction within the framework set by the preceding discussion. At the onset, it should be re-emphasized that it is assumed that all learning which occurs in a "classroom" is not, will not, and should not be the result of an instructor's efforts to provide formal instruction. For example, it seems evident that no instructor is able to teach successfully all the skills which can be detailed and sequenced as being needed by the beginning teacher who will be teaching reading; even if (s)he could, there is no satisfactory evidence that this type of approach to the instructional and learning processes is necessary or desirable. In keeping with this assumption, the instructor's role is viewed not only as one of instruction, but of facilitation as well, i.e., a person who leads, guides, stimulates, clarifies, supports. Consequently, (s)he must know when, how, and what to teach and also know when and how to structure the situation so that students can learn on their own.[4] Of course, if students are to assume responsibility for their own learning, they should be involved in many facets of program planning, implementation, and evaluation.

Ideally, personalized (as differentiated from individualized) instruction successfully accommodates individual differences in development,

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[4]In this context, it is interesting to note that much more learning than formal instruction might take place in some classrooms. The whole discussion presented above is suggestive of the importance of focusing first on the question of when and how students learn and then considering what an instructor's role and function should be with reference to classroom learning.

performance and motivation. Even if one assumes that developmental differences will be of negligible importance and if one ignores the importance of motivational factors, it is obvious that the students will differ in terms of immediate performance abilities, particularly with regard to the rate at which they become proficient enought to meet specific performance criteria. Clearly the problem of accommodating such differences in pace is eased in a flexibly scheduled program. Hopefully, besides differences in performance rate, other individual differences will be accommodated as well, e.g., special support for any student who lacks a prerequisite skill or the desire to participate. More generally, if a program is to be effectively personalized, it is probably important that the students and the instructors perceive themselves as participants in an educational enterprise which encourages innovation and continued experimentation. It is such a perception which contributes greatly to increased enthusiams and additional expenditures of effort. In this sense personalized programs may be viewed as involving, in great part, an institutionalization of the Hawthorne effect. While the Hawthorne effect usually denotes a temporary and deceptive effect, there is no theoretical necessity for the positive attitudes and increased behavioral output which result from being part of an experimental program to be temporary or deceptive in nature. The personalized program lends itself to the inclusion of such phenomena as a stable and positive aspect of the learning situation. What is being advocated is not complete novelty or novelty for its own sake, but a continuing emphasis on innovative practices to help elicit and maintain instructor and student

interest and effort.

These points aside, the major tasks involved in implementing instruction are (1) the initiation of planned instructional activity. (2) ongoing assessment of instructional activity, and (3) modification and ongoing management of instructional activity. The discussion here is limited to a paragraph summary of what is involved in the ongoing management of instructional activity. The reader is referred to Adelman (1973) for a fuller discussion of the various facets of such program implementation.

Ongoing instructional management can be viewed as involving two major concerns. One concern is how to structure the environment in a way which is compatible with the fostering of each involved person's desire and ability to learn or perform. A second concern is how to interact effectively with pertinent others, both within and outside the program.[5] (In dealing with such concerns it is well to recognize that efforts to overcome the various problems which arise include not only the direct resolution of a problem, but also include compensating for or tolerating a particular difficulty.) Discussion of ongoing management can be oriented around three topics--materials, methods, and behavior settings. Key sub-facets of each of these topics are presented in Table 2. Each of these sub-facets deserves extensive discussion. However, such discussion is beyond the scope of this monograph. It must suffice here simply to

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[5] Besides the obvious interactions with students, it should be noted that persons responsible for ongoing program management may interact within the program (1) with persons in positions of authority above them, (2) with persons in peer roles, and (3) with persons in sub-ordinate roles. The major interpersonal interactions outside the program which appear pertinent include members of such groups as parents, professionals in other fields and disciplines, government personnel, community leaders, and so forth.

Table 2

Outline of Areas for Instructional Focus with Specific Reference to the Ongoing Management of Program Activities (Derived to the Fourth Level)

VII Program Implementation

D. Ongoing Management of Program
   1. Materials (medium - message)
      a. Display
      b. Distribution
      c. Special Techniques for Specific Materials
   2. Methods (Procedural Models - Activities - Techniques)
      a. Facilitating Activation of Participants
      b. Facilitating Focused Behavior
      c. Facilitating Initiation of Activity
      d. Facilitating Maintenance of Participation
      e. Facilitating Appropriate Communication between Participants Regarding Results
      f. Strengthening Preceding Learning and Performance Patterns
   3. Behavior Settings (Organizational Format - Type, Locale, and Scope - Climate)
      a. Authority Relationships
      b. Peer Relationships
      c. Intellectual Climate
      d. Emotional Climate
      e. Moral Climate
      f. Physical Environment

emphasize that such management requires capitalizing on what is known about learning, behavior, and instruction with specific reference to such matters as: (a) motivation, (b) attention, (c) performance and practice, (d) reinforcement, (e) interpersonal relationships, (f) growth and development, and (g) a particular curricular area (see Adelman, 1973).